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ABSTRACT

This document contains the papers from plenary sessions, forums, and panels conducted at a conference on the new forms of vocational education needed for the world economy of the 21st century. After introductory remarks and opening addresses by the Minister of Education and Science of Finland and the Acting Director of the European Commission, the following three plenary sessions appear: "Work, Technology and Competence--Aspects of the History and Future of Work" (Ilkka Tuomi); "Models and Practices of Work-Linked Training in the EU [European Union] Member States" (Johan van Rens); and "Cooperation between Vocational Education and Training and Working Life in Finland--Emphasizing the Standpoint of On-the-Job Learning" (Timo Lankinen). The first forum, European Priorities and Perspectives in Cooperation between Vocational Education and Training and Working Life, contains the following papers: "Synergies between Formal Education and Workplace Learning" (Albert Tuijnman); "Expanding Importance of Formal Training" (Candida Soares); "Enhancing the Partnership between Vocational Training and the Economy at Large--The Initiatives and Experiences of the European Vocational Training Foundation" (Bernhard Buck); "On-the-Job Learning in the Transition from Training to Employment--The French Experience about Alternance" (Jose Rose); "Trainees in the Workplace--Policy Priorities of Employees" (Jari-Pekka Jyrkanne); and "The Mechanisms of Quality Innovation in the Dual System--The Future of the Dual System" (Ernst Uhe). The second forum, Improving the Impact of EU Training Programmes at the National and European Levels--Case: Leonardo Da Vinci Programme, contains the following papers: "Utilisation of EU Educational Programmes at the International and European Level--Case: The Leonardo da Vinci Programme" (Markku Markkula); "Building on and Disseminating Project Results" (Sergio Corti); "Connection between Community Policy and National Policy--French Experiences" (Claudine Boudre-Millot); and "How to Improve the Impact of EU

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Programmes Finnish Experiences" (Mikko Nupponen). Forum 3, The On-the-Job Learning, Promotion of Mobility, and Implementation of the Europass System, contains six papers: "Promoting Mobility for Persons in Training: The EUROPASS Training" (Margarida Marques); "Mobility as a Learning Process" (Soren Kristensen); "Employers' Perspectives to European Pathways in Work-linked Training" (Nicolas Gibert-Morin); "The EUROPASS A Short Step on the Way towards the European Workers Mobility" (Luis Miguel Fernandez); "Printing Industry Experience" (Lauri Norvio); and "The EUROPASS System in Germany--The EUROPASS from 2000: Take-Off for a European Certificate System" (Peter Thiele). Five papers are included in the final forum, The Impact and Quality of On-the-Job Learning: "How to Redesign the Relations between the Educational System and Working Life" (Osmo Kivinen); "Transition from School to Work--UK Policy Developments, with Special Reference to Quality, Progression and Employability" (Alain Davies); "Trainers in Enterprises--Developments in Germany and the European Dimension" (Reinhard Selka); "Evaluation of the Reform of Work-Based Learning in Norway" (Ole Briseid); and "The Effectiveness of On-the-Job Training" (Marcel R. van der Klink). The document also contains a transcript of a panel discussion, results of the forums and panel discussion, two views of Finnish business life ("Cooperative University-Industry Joint Education and Training of Flexible Manufacturing Systems" by Timo Raino and Reijo Tuoliko, and "New Cooperation Between Vocational Education and Working Life" by Martin Granholm), and conclusions ("Primary Themes in the European On-the-Job Learning Discussion" by Kari Nyyssola). (KC)

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ED 449 367

EDUCATION AND TRAINING AND WORKING LIFE

FINAL REPORT

18.–19.11.1999, TAMPERE, FINLAND

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K. Nyyssölä

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NEW CHALLENGES IN THE COOPERATION BETWEEN EDUCATION AND TRAINING AND WORKING LIFE

FINAL REPORT

KARI NYYSSÖLÄ (ED.)

MINISTRY OF EDUCATION
NATIONAL BOARD OF EDUCATION

in cooperation with the
EUROPEAN COMISSION

DEAR READER

Vocational education is seeking new forms for the 21st century. The globalisation of the world economy and developments in information technology have a greater impact on the planning and development of vocational education than ever before. Entering the new millennium gives cause to consider what types of knowledge and skills should be provided by vocational education and what kinds of expertise will be needed in Europe in the future. The goal will not only be adapting to change, but also management of change itself in accordance with the values and goals set.

The goal of vocational education will be to increase the professional expertise of the entire working population, to provide basic preparations for lifelong learning and to fulfil the needs of the workplace. Achieving these goals requires cooperation between educational organisations and working life as well as between European states.

A central theme during the Finnish Presidency was the development of cooperation between vocational education and the working life. The *New Challenges in the Cooperation between Education and Training and Working Life* conference was held in Tampere on 18-19 November, 1999, in connection with this theme.

Speeches and their resulting discussions held at the conference are presented in this report. Primary themes include a comparison of various on-the-job learning models, the impact of the Leonardo programme, the EUROPASS Training as part of mobility in vocational education and the quality and learning environments of on-the-job learning. The report contributes to the European discussion on on-the-job learning, hopefully inspiring new ideas in the bringing together of education and working life.

Ms Maija Rask
Minister of Education and Science

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INTRODUCTION

Mr Kari Nyyssölä

CONFERENCE OBJECTIVES AND CONTENT

During the Finnish EU Presidency, on 18-19 November, 1999, a conference entitled ***New Challenges in the Cooperation between Education and Training and Working Life*** was held in Tampere, Finland. The objectives of the conference were to promote the cooperation between education and working life as well as to improve the quality of vocational education. Efforts were made to achieve these objectives by comparing results obtained in different European countries and the impact of various models. One theme in particular was on-the-job learning. Also, the conference provided an opportunity to consider how the cooperation between education and working life could best be promoted at the Community level.

The conference structure consisted of plenary presentations and four separate forums. In plenary presentations an extensive basis for discussion was established for problems arising in the cooperation between education and working life. The primary theme of the conference was broken down into individual sub-themes, which were deliberated upon in the various forums. New forms of cooperation, mobility and the EUROPASS Training in vocational education, the impact of results from the Leonardo programme and the quality of on-the-job learning were addressed at these forums. Thoughts, problems and initiatives arising were assembled at the conclusion of the conference.

In connection with the conference an exhibition was also held, at which Leonardo da Vinci projects related to on-the-job learning were presented.

Participants from all EU countries, EEA countries and EU Candidate Countries. Approximately 200 persons were in attendance. Participants consisted of representatives from educational planning and management, employers and employees, educational institutions and providers of training, research institutes and European development projects. Finnish, English, French and German were the languages used at the conference. The conference was held at the Museum Centre Vapriikki.

The final report complies with the structure of the conference. Each session comprises its own chapter of individuals and their speeches are listed in order of presentation. But for a few exceptions, the report contained all speeches made at the conference. After the speeches there is the conclusion, in which the primary themes of the European discussion on on-the-job learning are introduced and new ideas occurred during the conference are addressed.

CONFERENCE SCHEDULE

WEDNESDAY 17 NOVEMBER

CONFERENCE DINNER WITH CULTURAL PROGRAMME AT TAMMER RESTAURANT, HOSTED BY THE MINISTRY OF EDUCATION 8:00 p.m.

THURSDAY 18 NOVEMBER

OPENING OF THE CONFERENCE 9:00 a.m.- 12:30 p.m.

***Chair**: Mr Markku Linna, Director General for Education and Science Policy, Ministry of Education, Finland*

The conference was opened by Ms **Maija Rask**, Minister of Education and Science, Finland. Greetings on behalf of the European Union Commission were delivered by Mr **Otto Dibelius**, Acting Director of the Directorate for Vocational Training at the DG Education and Culture.

Ms **Maija Rask** opened her speech by welcoming the participants to the conference. In her speech she stated that the cooperation between education and working life is required at every stage of the educational process, such as in the estimation of educational needs, planning of curricula, instruction and evaluation of operations. Ms **Rask** also brought up the "Rolling Agenda" initiative introduced during the Finnish Presidency, which aims at the development of the Education Council work and the improvement of operations, continuity and impact. Primary themes in the Education Council work in the field of vocational education will be the specification of central focal points for European cooperation and the development of cooperation and working methods.

Mr **Otto Dibelius** discussed the EU objective to establish an educational and cultural region open to all Europeans. In the cooperation between education and the workplace he emphasised the open approach of learning and working life, company responsibility and the significance of apprenticeship and alternance-based systems. He also dealt with the role of the European Social Fund, Leonardo programme and EUROPASS Training in the development of vocational education and promotion of mobility.

PLENARY PRESENTATIONS

Plenary presentations were given by Mr **Ilkka Tuomi** Ph.D., Finland, Mr **Johan van Rens**, director of CEDEFOP, and Mr **Timo Lankinen**, Director General for Vocational Training, Ministry of Education, Finland.

The basic topics presented by Mr **Ilkka Tuomi** were the changes in the perception of work from ancient times to the present, the impact of developments in technology on qualifications and the various meanings of work in the future. He addressed, among other things, the impact of consumerism on a changing work process and the impact of networks and new learning environments on vocational education.

Mr **Johan van Rens** presented on-the-job learning models and practices of EU member states. Education must respond more effectively to the rapidly changing needs of the workplace. This is why far-reaching reforms are needed to produce a 'holistic approach' to work-linked training. In concluding his presentation, Mr **van Rens** discussed several recommendations for the achievement of this objective.

Mr **Timo Lankinen** presented cooperative models of Finnish education and working life. In Finland, there has traditionally been a strong school-based vocational education system. This is the result of several historical factors. In the 1990s the inclusion of on-the-job learning, however, has been taken more into consideration in vocational education. With regard to this, Mr **Lankinen** discussed among other things, the increase of on-the-job learning periods in vocational education, the expansion of apprenticeship training and the creation of the polytechnics system (non-university higher education).

OPENING OF THE EXHIBITION

12:30-
2:00 p.m. LUNCH

ALTERNATIVE FORUMS 1 AND 2

FORUM 1: EUROPEAN PRIORITIES AND PERSPECTIVES IN COOPERATION BETWEEN VOCATIONAL EDUCATION AND TRAINING AND WORKING LIFE

2:00-
5:30 p.m.

***Chair**: Mr Roland Østerlund, Director General for Vocational Training, Ministry of Education, Denmark*

***Rapporteur**: Mr Heikki Suomalainen, Education Policy Adviser, The Confederation of Finnish Industry and Employers, Finland*

Divergent European vocational educational systems include a variety of cooperative models between education and working life. Their development also requires cooperation between the different Member States and joint operation at the Community level. The exchange of experience and knowledge on national solutions and the deliberation upon common European priorities is an essential point of the development of cooperation between education and working life.

These topics were addressed at the forum, both at a pan-European level and from the viewpoints of each Member State. At the opening of the forum, Mr **Albert Tuijnman** gave a thought-provoking general presentation of the synergy occurring between school-based learning and on-the-job learning at educational institutions. Afterwards, Ms **Cãndida Soares** presented the position of formal education as a part of on-the-job learning, seen from a Portuguese point of view. Mr **Bernhard Buck** made a presentation of European Training Foundation operations in the reinforcement of education and the economy in Eastern Europe. Following these speeches, the subject matter shifted to a country-based analysis of on-the-job learning models. Mr **José Rose** gave a presentation on experiences of the French alternance system, Mr **Jari-Pekka Jyrkänne** dealt with the status of Finnish trainees in workplaces, particularly from the employees' point of view, and, finally, Mr **Ernst Uhe** shed light on experiences on the innovation and future of the German dual-based system.

2:00-
5:30 p.m.

FORUM 2: IMPROVING THE IMPACT OF EU TRAINING PROGRAMMES AT THE NATIONAL AND EUROPEAN LEVELS – CASE LEONARDO DA VINCI PROGRAMME

***Chair**: Mr Markku Markkula, Member of the Parliament, Finland*

***Rapporteur**: Mr David Oatley, EU Training Programmes Manager, Department for Education and Employment, United Kingdom*

The Leonardo programme is a European Union educational programme, which endeavours to enhance basic vocational education and the level of continuing education in Europe by means of European cooperation. Efforts to achieve this objective will be made by various actors. Some of the Leonardo programme's first phase projects have already been concluded. The impact of the programme will be evaluated at both the national and the Community level.

The objective of the forum was to seek answers to the following questions: What is the utilisation of results in practice, who benefits from the results, who is responsible for the dissemination of results and how can the impact of the programme be further improved? These issues were addressed in five speeches and in the panel discussion held at the end of the forum.

Serving as forum chairman, Mr **Markku Markkula** gave a short opening speech in which he addressed the significance of developing a dissemination strategy. He also introduced a new guidebook of dissemination entitled "Effective Dissemination". After this, Mr **Sergio Corti** presented the dissemination of project results as seen from the European Commission's point of view. Ms **Claudine Boudre-Millot** continued by discussing her experiences with the role of the Leonardo programme in the mutual agreement of educational policy at both the national and the Community level, particularly as seen from a French point of view. Mr **Mikko Nupponen** presented Finnish views on the utility and impact of results and Mr **Colin McCullough** from CEDEFOP illuminated the possibilities offered by information systems in the dissemination of results.

In addition to the speakers themselves, the participants of the panel included Mr **Manfred Schüller** from Germany, Mr **Valeriano Munoz López** from Spain, Mr **Johan van Rens** from CEDEFOP and Mr **Anders Hagström** from Finland.

8:00 p.m. DINNER AT TAMPERE CITY HALL,

hosted by the City of Tampere

FRIDAY 19 NOVEMBER

ALTERNATIVE FORUMS 3 AND 4

FORUM 3: THE ON-THE-JOB LEARNING, PROMOTION OF MOBILITY AND IMPLEMENTATION OF THE EUROPASS SYSTEM 9:00 a.m.- 12:30 p.m.

***Chair**: Mr Reijo Raivola, Professor, University of Tampere, Finland*

***Rapporteur**: Ms Carita Blomqvist, Senior Adviser, National Board of Education, Finland*

By promoting the mobility of students, their individual professional knowledge and skills are improved, they are provided with the preparations required by internationalisation and the cooperation between educational institutions 0and the workplace is enhanced. Mobility in vocational education is promoted by the EUROPASS Training (ET) decision, which came into effect in the beginning of 2000. The EUROPASS is a certificate, referred to as the "European pathways", which verifies vocational training period completed in another Member State.

The objective of the forum was to promote the implementation of the ET by considering the significance of mobility in vocational education, the role of the ET as a promoter of mobility and possible development of the ET in the future.

Ms **Margarida Marques** discussed the promotion of "European pathways" from the Commission perspective. Mr **Søren Kristensen** of CEDEFOP continued with an extensive presentation of the significance of mobility in vocational education and the status of mobility as an element of the learning environment. Afterwards, speeches were made by the social partners. Mr **Nicolas Gibert-Morin** commented on the EUROPASS from the Union of Industrial and Employers' Confederations of Europe (UNICE) point of view and Mr **Luis Miguel Fernández** from the European Trade Union Confederation (ETUC) point of view. Then, the discussion moved on to address experiences with the EUROPASS at the national level. Mr **Lauri Norvio** from Finland told of his experiences in the printing industry, Mr **Peter Thiele** made a presentation of ET applications in Germany and, finally, Mr **Firmino Couto**, representing the upcoming President of the EU, shed light on ET implementation in Portugal.

9:00 a.m.- 12:30 p.m. FORUM 4: THE IMPACT AND QUALITY OF ON-THE-JOB LEARNING

Chair: *Mr Ole Briseid, Director General for Vocational Training, Ministry of Education, Norway*

Rapporteur: *Ms Kirsi Kangaspunta, Counsellor of Education, Ministry of Education, Finland*

Instruction provided in educational institutions and on the workplace should comprise an entity, in which both maintain a significant role and through which the student achieves the best possible qualification for their future vocation. Improvement of quality and development of quality assurance systems is important to the promotion of cooperation between the educational institutions and the workplace. There should also be a close cooperation between instructors and workplace supervisory personnel. Training objectives must be set and their application and the evaluation of results must be agreed upon as a basis for cooperation.

Topics of discussion at the forum were factors affecting the quality of on-the-job learning, evaluation and certification of instruction provided at the workplace and the impact of on-the-job learning.

Mr **Osmo Kivinen** opened the discussion with a presentation of ideas on how new links between the educational system and workplace could be created. Mr **Alain Davies** continued with a presentation on measures designed to promote British youths' transition from the educational sphere to working life. Mr **Reinhald Selka** discussed the direction ot on-the-job learning from a German standpoint. Afterwards, forum chair Mr **Ole Briseid** presented Norway's new work-based vocational education system and evaluation results on the functionality of the system. Finally, Mr **Marcel R. van der Klink** from the Netherlands illuminatedthe results of a study done on on-the-job training impacts.

12:30- 2:00 p.m. LUNCH

PRESENTATION OF THE RESULTS OF THE FORUMS AND PANEL DISCUSSION

2:00 - 5:30 p.m.

***Chair**: Ms Kaarina Dromberg, Member of the Parliament, Chair of the Committee for Education and Culture, Finland*

Each forum rapporteur produced a summary of the forum's speeches and their resulting discussions. The rapporteurs presented their summaries in turns. At the conclusion of the summary, each rapporteur posed questions to participants in the panel discussion. These questions formed the basis for the panel discussion. The participants of the panel were Ms **Kaarina Dromberg** (chair), Mr **Sergio Corti**, Mr **Luis Miguel Fernándes**, Mr **Heikki Suomalainen**, Mr **Reijo Raivola** and Mr **John West**.

VIEWS OF FINNISH BUSINESS LIFE ON THE COOPERATION BETWEEN EDUCATION AND WORKING LIFE

Prior to the conclusion of the conference, representatives of Finnish business life presented their views on the cooperation between education and working life. Mr **Timo Rainio** of the Tampere Automation Center provided a practical example of network cooperation between educational institutions and companies, consisting of, among others, the Tampere University of Technology and various mechanical engineering and automation technology companies. Mr **Martin Granholm** of UPM-Kymmene and the Training Committee of Finnish Industry and Employers presented his views on cooperative issues from the point of view of Finnish industry and employers.

CONFERENCE CONCLUSION

OPENING OF THE CONFERENCE

Ms Maija Rask, Minister of Education and Science, Finland

Distinguished Director Dibelius, Respected Experts of Vocational Education, Ladies and Gentlemen,

As Minister of Education of the European Union Presidency, I have the great pleasure of welcoming You to Finland and the city of Tampere.

The European Union is entering a time of great change. This is affected above all by the coming into force of the Amsterdam Treaty. Other extensive changes in EU operations will also have an impact on the future: the evaluation and reform of EU institutions, the reformation of EU internal operational policy and EU expansion.

During this time of change, it is important to look after the interest of the European citizens. Europe must be able provide its people with equal opportunities in gaining access to information and skills in this our Information Society. Lifelong learning and employment must be seen to. In order to achieve these goals Europe must continue to invest in high-quality education, vocational education, research and technology in accordance with the demands of the future. During its Presidency, Finland has continued the work begun by its predecessors. We have endeavoured to do our very best in the promotion of issues on the European Union agenda. In addition to this, we have also specified a number of topics important to the future of Europe for discussion, which will be brought up at the expert conferences to be held during our presidential term.

The main theme for the conference of vocational education experts in Tampere is cooperation between vocational education and training and working life. This cooperation between education and the workplace – a partnership - cannot be overemphasised. A functional cooperative effort can improve education's quality and its correspondence with working life. Cooperation assists youths in their transition from an educational environment to the workplace. Cooperation also allows for the promotion of new innovation implementations as well as the development of labour organisations and their operations. A productive cooperation also establishes a foundation for the practical implementation of lifelong learning.

Cooperation between vocational education and the workplace is necessary in all phases of the training process – in anticipating training needs, in planning educational programmes, in instruction and in the evaluation of operations. Cooperation should be long-term and continuous and all parties should benefit from it.

The single most important issue concerning cooperation is, I feel, the realisation of on-the-job training as a part of a basic vocational education. On-the-job learning brings the two parties concerned into a cooperative relationship. Vocational education and the workplace each have their own role as creators and maintainers of professional skill and enterprise. Cooperation – genuine partnership – is of decisive importance. Educational institutions or jobs alone are not the ideal environment for learning, but a part of the culture in which vocational growth can occur.

The tightening of cooperation between education and the workplace and improving on-the-job learning is an ongoing discussion in most EU Member States. In many countries objectives have been set for the development of cooperation, based on EU employment guidelines documented in national employment programmes.

The forms and points of focus of cooperation between vocational education and the workplace vary from country to country. Solutions cannot be transferred as such from one state to the next. A continuous exchange of information and experience is therefore imperative. By comparing and evaluating experiences, the results achieved can be further developed. This conference also serves the same purpose – as a channel for discussion.

An initiative drafted during the Finnish Presidency provides a new foundation for cooperation and counsel concerning European education, which endeavours to develop the working methods of the Education Council as well as improving the continuity and influence of its operations. The goal of the initiative is to define and reinforce the status of educational issues in Commission operations. Themes and their related resolutions vary from one Presidency to the next and they have not been the best possible way to address Community issues.

The primary content of the initiative is the "Rolling Agenda". That is to say, an operational framework to be drafted between the Commission and EU Member States, in which matters of current interest will be brought up on a yearly basis. It is also intended to compare how issues are resolved in different countries.

The goal is to promote European cooperation, exchange of information and the learning of good practices. The Rolling Agenda provides support for the setting of common goals and allows for the monitoring and evaluation of their realisation. Using the operational framework, the emphasis placed on educational issues in EU operations can be increased. The initiative was discussed at an informal meeting of the Education Council held in Tampere in September of 1999, and the matter was placed on the official Council agenda on 26 November 1999.

Questions concerning central issues in the development of the work of the Education Council work were:

"What are the primary points of focus in European cooperation concerning education and vocational training?"

"How can European cooperation in the educational field be developed?"

"How can working methods be rationalised so that a greater continuity and uniformity of work is ensured for several years and not just during individual presidencies?"

From a vocational education standpoint, the development of cooperation and work methods is perhaps still a greater challenge than in other educational spheres. This, among others, is because vocational education issues are handled on a varying basis in two separate councils as well as the sub-groups working under them. Secondly, vocational education has been emphasised in Community employment strategies. And thirdly, social partners and the processes they work with naturally play an important role in vocational education.

The raising of vocational education questions on the Rolling Agenda is a significant issue. Potential questions to be addressed might include the following:

1) A central question of mutual interest to all Member States is how cooperation between vocational education and the workplace can be promoted by Community, especially concerning on-the-job learning, as well as promote the transition from education to work.

2) From a vocational education and European labour market standpoint, the promotion of employee mobility is an important issue. The goal of the EUROPASS decision, effective as of the beginning of 2000, is to promote on-the-job learning in other Member States. Previously, on the Community level, efforts were made to promote, in particular, the mobility of university students. I felt it important that we continue to promote the mobility and performance of on-the-job learning in other Member States for those individuals who have received a basic vocational education. The workplace needs a professional and skilled workforce. These efforts can also in part serve to improve the attraction of vocational education – a problem shared by many countries.

3) Mobility will be deliberated upon at a forum for openness in vocational qualification. It will make recommendations to political decision-makers on matters such as how barriers to mobility can be removed. Joint information on vocational qualification received in Member States will be increased, improving their openness, or "transparency" as it were.

I would like to wish strength and determination to you, participants of this conference of vocational education experts, as you promote the vocational education. I also hope you will all enjoy your stay here in Tampere so much that you will have ample reason to visit us again. You are most warmly welcome.

Ms Maija Rask

Mr Otto Dibelius, Acting Director, European Commission

Minister, Ladies and Gentlemen,

I would like to thank the Finnish Presidency for the warm welcome we have received here in Tampere. I know that Commissioner *Reding*, who regrets not being able to attend, would also want me to congratulate the Presidency on the organisation of this important conference. It is another indicator of your strong commitment as the Presidency to push ahead the European agenda in order to meet the key challenges for education and training in a Europe of knowledge – the challenge of bringing learning to life.

Your commitment is very much in line with the new Commission's objective of building a European educational and cultural area. In this **"Citizens' Europe"**, all persons, irrespective of age, origin or background, would have the possibility to develop their full potential, based on broad access to a range of quality learning opportunities and experiences, both formal and informal.

I don't need to remind you that Europe and its citizens are confronted by a continuous process of rapid and complex change. We cannot avoid:

- the consequences of science and technology for the production of goods and services;
- the impact of the information society on the nature and organisation of work;
- the effects of internationalisation on job creation and labour markets.

Although education and training are not the only means at our disposal to face these challenges, they are crucial policies if we are to develop economic competitiveness and employment. If the countries of Europe are to hold their own, they must concentrate on developing and investing in the knowledge and skills of their citizens and enterprises.

The 1997 Amsterdam Treaty of the European Union provides a sound basis for pursuing this objective jointly at European level. Its preamble places education and training at the centre of our strategic concern for shaping the future of Europe and its citizens. The Treaty includes an Employment chapter which provides for the development of a coordinated European strategy for employment, and particularly for promoting a skilled, trained and adaptable workforce. This has lead to a set of very concrete employment guidelines, which have at their very core the development by all Member States of comprehensive policies and targets for Lifelong Learning. These employment guidelines therefore constitute key criteria for the future development of our vocational training policy.

In the field of vocational training, Article 150 of the Treaty foresees that Community policy shall support and supplement the action of the Member States. The diversity of national systems is something we value as it allows us to compare and exchange experiences and good practice and develop solutions to common problems. With this in mind, the Commission specifically aims to develop a new framework of structured political cooperation with the Member States to promote quality and innovation in the national systems. We are therefore fully supportive and appreciative of the **"Rolling Agenda"** initiative, which has been launched under the Finnish Presidency. This will provide a concrete form of continuous and focused cooperation, which could extend over several Presidencies, for the discussion and development of priority themes. It is envisaged that, in the first instance, better understanding and cooperation could be established on the following three issues:

(1) the role of education and training in employment policies;

(2) the quality of education and training at all levels;

(3) the promotion of mobility, including recognition of qualifications and periods of study.

In addition to cooperation with the Member States, and, of course, with the European Parliament, **dialogue with all the actors** involved in vocational training must be further developed in order to achieve the objective of Lifelong Learning. A European framework for this dialogue should ensure cooperation between the public authorities at all levels, the Social Partners, enterprises and all institutions involved in vocational training. The objective must be to develop a Community vocational training policy which not only is based on the real needs of the citizens but also has a clear European added-value.

Of course, these political priorities must be underpinned by the effective implementation of our various Community instruments of cooperation and action in the field of vocational education and training. In particular, I would like to emphasise the importance of the **Leonardo da Vinci** programme of which the 2nd phase will run from 1st January 2000 until 2006. Its aim remains broadly unchanged – to develop the quality, innovation and European dimension in vocational training systems and practices, through transnational cooperation, in order to promote employability, adaptability and entrepreneurship. This programme will continue to be a laboratory of innovatory approaches and methods, which henceforth must be disseminated on a wider scale and transferred in a more effective manner into national systems and structures.

Other Community instruments also contribute to a Europe of knowledge and to promoting innovation, notably the **European Social Fund and the Equal Initiative**. It is necessary that overall consistency and complementarity be ensured between Leonardo da Vinci and these instruments, not only by the Commission but also by the Member States.

This brings me to another top-priority to which not least Finland attaches a very high importance. This is to ensure the successful integration of the pre-accession countries into the Community vocational training policy. In particular, Leonardo da Vinci has now become a pan-European programme in the real sense, thus permitting much more mobility of apprentices, trainees and trainers, partnerships between training-providers as well as a large exchange of experience and good practice for the benefit of the candidate countries and of the Union.

Let me now turn to the theme of this conference, which we welcome because of its relevance to the real challenges faced by Member States and citizens. As I said before, the pressure of constant change resulting from new technologies, the Information Society and global competition must be met by the development of highly-qualified human resources. This can only be achieved by far greater **cooperation between the world of education and training and that of business**.

Schools, training institutions and businesses mutually complement one another as places of learning and they should be brought closer together. Although both policymakers and the social partners have, over the last 10-15 years, shown increasing concern with the development of better links between school-based education/training and the workplace, in many Member States this has happened late and gradually, or not at all and the separation of learning and production continues. In addition, European Societies are running the risk of continuing if not increasing **skills mismatch** between the requirements of our new economic and social environment and the capabilities of people.

Developing better and stronger links between education/training and business can do nothing but good, for both sides, and helps underpin equal employment opportunities. There are three ways in which this problem is to be tackled.

Firstly, learning in the widest sense must be **opened up to the world of work**. Without reducing the point of learning solely to the purpose of employment, an understanding of the world of work, a knowledge of entreprises and an insight into the changes which mark production processes are some of the basics which must be taken into account.

Secondly, training cannot be seen purely as a way of supplying skilled labour to employers, **Entreprises themselves bear a responsibility** of giving a chance to those who have been failed by the traditional education and training systems, and of making an effort to reskill their staff, thus enabling them to cope with technological innovation.

Thirdly, reinforcing the links between schools, training institutions and the business sector must be based primarily on apprenticeship and alternance schemes in which young people are involved in on-the-job learning. Such schemes should provide young people with more than just a first contact with the world of work, thereby placing them at a considerable advantage for entering the job market.

I should stress that many Member States have initiated policies designed to strengthen or develop apprenticeship and even more have developed alternance programmes. However, a **survey of the last 10-15 years' experiences in 15**

Member States indicates that, while governments may be able to affect quite rapid and radical changes in formal school-based training policies, labour market practices are far more deep-rooted and resistant to change. However, there is also evidence that in countries where apprenticeship is highly valued and supported by companies as a means of selecting and training workers, it endures.

Moreover, alternance programmes, which do not involve a formal relationship with the employer, have been widely developed by Member States, especially by those without high-status apprenticeships. These programmes take two forms: emergency measures for disadvantaged young people and pedagogically-inspired programmes aimed at familiarising students with the concrete conditions of the workplace.

Lastly, I would like to underline the importance of **transnational mobility** as a means to address Europe's economic, social and cultural challenges. In broad terms, transnational mobility is essential for the achievement of an open educational and cultural area of European citizenship. In specific terms, mobility is a key factor for the development of cooperation between vocational education and training and working life. It opens the door to the transfer of professional skills and knowledge, particularly in innovative areas such as new technologies, new management methods and organisation of work.

However, as you are aware, much remains to be done in this respect and many obstacles to transnational mobility remain within the Member States, mainly legal and administrative obstacles concerning social protection and taxation, lack of transparency and recognition of qualifications, etc.

There are two new **important initiatives** at Community level which aim to address this problem. Firstly, the Commission will now propose a **recommendation concerning the mobility** of students, trainees, young volunteers, teachers and trainers. The objective is that the European Parliament and the Council should recommend specific actions to the Member States not only in order to eliminate or at least reduce the most obvious obstacles, but also in order to stimulate and promote mobility through appropriate positive measures.

Secondly, on 1st January 2000, a formal Council decision known as **EUROPASS Training** will become operational. This decision establishes a EUROPASS document intended as a record at Community level of the periods of training which a person undergoing work-linked training, including apprenticeship, has followed in another Member State. These are known as "European pathways". Each European pathway shall form part of the training in the Member State of provenance according to its own legislation or procedures. This EUROPASS instrument should not only promote mobility, apprenticeship and alternance but also lead to the development of links between schools, training institutions and the workplace throughout Europe.

Minister, Ladies and Gentlemen,

The challenges I have described are daunting but there is no doubt that we are on the right path at Community level. It is only by working together in this sort of gathering that we can find solutions to common problems. It is our task to help to make a Citizens' Europe, the European space of education and culture, a living reality. I think it is also important to ensure that Community action in vocational training never loses sight of this vision. This conference, I am sure, will meet that goal.

Thank you for your attention.

Mr Otto Dibelius

EUROPE
into the New Millennium

Mr Markku Lahtinen and Mr Markku Linna

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PLENARY PRESENTATIONS

WORK, TECHNOLOGY AND COMPETENCE - ASPECTS OF THE HISTORY AND FUTURE OF WORK

Mr Ilkka Tuomi

Introduction

Today we are in the midst of a major social transformation. To understand it, and its implications, we have to rethink some very basic ideas that underlie our everyday life and its practices. In what follows, I shall focus on three important and central ideas of modern society. I will talk about work, and its changing role in human societies. I will re-evaluate some aspects of technological change. And, finally, I will try to propose some questions concerning the new forms of learning and competence development, which seem to be irreducibly bound with the new forms of work and technological change.

Some years ago, when Finland was in deep recession, we had unemployment rates above 20 percent. There was probably not a single family, which had not been touched either directly or indirectly by unemployment. The welfare state had its most stringent test, and, in many ways, one could say that it showed its strength.

In the middle of this turbulence, the welfare state was asked to do a curious job. There were frequent voices asking for the state to guarantee work for everyone. Human work was seen as a human right. Indeed, some went as far as to demand that the right for work should be included in the Finnish constitution. It was noted that without work we lose our social identity, future prospects, and self-respect. We heard stories about people who kept going to the work every morning, months after they had lost their jobs, just to give their neighbours, and sometimes families, the impression that everything is fine.

Against this context it is interesting to note how much there was talk about work, and how little it was actually discussed. Most of the time people seemed to be arguing that job creation and full employment are top priorities for the society; or that jobs are permanently being destroyed and that it is about time to wake up to the nightmare. Yet, the centrality of work in modern society was rarely discussed, and even less the reasons for this centrality. Work was so central that it could be taken for granted.

The meaning of work in ancient times

Human memory is short. No one had to ask why work is central and so important.

For us the natural way to succeed in life is to succeed better than our parents. During this century, it has been an easy job. After the Second World War factories produced a continuous flow of new exciting products, which were outside the imagination of every previous generation. Tractories replaced horses on the fields. New houses were built. Roads were constructed and cars were bought. The public sector expanded, providing socially prestigious jobs in abundance.

Diligence conquered need and want. As Virgil had stated over two millenniums ago: labor omnia vincit, work overcomes all obstacles.

For Virgil work, however, didn't have the same meaning as it has for us. His labor is not compensated by wages or salaries. He talks about agriculture. More specifically, he talks about human want, and the ways humans can address the needs and necessities of everyday life. During the last two millenniums we have not only moved from the fields to clean and well-lit offices, but also the meaning of work has radically changed. Sometimes it seems that the change has been so profound that it is not easy to understand what people were talking about when they talked about work.

For Hesiod, ergon—a word that is nowadays often translated as work—meant activity. Work was a way to prepare for the future. With work, man fills his barns, keeps the fiery-eyed hunger away, and secures a good life to himself and his family. With their work humans collect cattle and property, and become a source of pride to the gods.

In Hesiod's world, Golden Age meant time when people didn't have to work. Work appears only at the dusk of Golden Age, at the beginning of the Iron Age, together with the modern man. Work becomes a way to understand the difference between the Golden Age and the Iron Age. In a sense, work becomes an active process which constantly reproduces and reconstructs the fact that humans have lost something that the gods had. In this sense, work becomes a key part of the real nature of man, the aspect that distinguishes men from gods.

Ergon is something that both slaves and free men can be engaged with. This, however, is not the only known form of work. The other form is ponos. Ponos is work that does not necessarily produce anything, but which has to be done for reasons beyond the control of the worker. Ponos is toil: rolling a huge rock to the top of the mountain, day after another, without a clear meaning or result.

Before Plato and Aristotle we therefore have two concepts of work: one that signifies the distancing of men and gods; and another that signifies the hard toils of slavery. In Aristotle, the interpretation of work, however, gets a new twist. The opposite to work is now schole, time that is free from work. Ponos is something that constrains praxis, social activity that defines a person with full citizenship and good life. Energeia, being in the state of activity, becomes something that can be actualized as praxis and poiesis.

Work as a production tool

For a well-educated mind the modern concept of work, therefore, must have been incomprehensible. Why would anyone in his right mind want to have a constitution in Finland that dictates that everyone has to be provided with a job? What is this self-employed slavery? Where did this strange idea of full employment come from?

Part of the answer is in the Bible. To become real humans, we have to leave the Paradise and earn our living by the sweat of our brows. The difference between dust and life is work, and when work ceases, to dust we will return. In biblical terms, the idea of retirement does not make any sense. To put it bluntly, retirement means death. In this human microcosm life is full of work, and we reflect God, the worker, who creates the world, and rests on Sunday.

But in the human world Monday mornings are eternal. God's work has to be something different from the work of Adam. It is, of course, impossible that God would be punished by toil. Yet, there has to be a link that connects the two. Indeed, Luther solves this problem by defining work as a form of prayer. By working, we become part of the work of God. Calvin goes even further, arguing that through work we realize God in ourselves. Only through success and profit from work, men are able to show that they are among the Elect.

At the same time, social utopists bring the theme of ponos back to the discussion. Work becomes a problem of planning. As Francis Bacon teaches us, work can be divided among the members of society, and only those who do their fair share earn their place in the society. Society becomes a society of ants. Work has to be understood as a social relation.

The interpretation of energy changes, as well. It becomes a hidden potential that can be stored and transformed into work at will. In the modern scientific worldview, this aspect of work becomes increasingly important. For the first time, work becomes abstract and detached from human nature. Work becomes one factor of production, which can be measured and mixed with land, money and machines to create products that never existed before. Instead of working for God, people start to work for other people.

In the middle of industrialization, Marx combines the view that work is part of human nature and the idea of social division of labor. Indeed, Marx argues that humans are fundamentally social beings that become what they are only as a result of collective activity of production. For Marx, human labor creates humans and their societies, and makes them different from apes. The human mind and social structure develop simultaneously with increasingly complex forms of production.

Marx, however, also notes that the social division of labor has its risks. In the process, the worker may lose his or her connection with the results of labor. Indeed, Marx argues that this process of alienation is the source that historically creates private property and the capitalist system, which further and further alienate workers from the meaning of the objects of the production. Work, according to Marx, becomes simply a means for survival. As a consequence, humans lose their distinctive character as social beings, and become animals again. Or, in other terms, they become parts of a machine, and subjects of forced labor.

In this century, all these aspects of work are simultaneously present. For a while, everything is fine. The demands of production, the values of culture, institutions of education, legal systems, opportunities, and individual progress are nicely aligned. Maybe we could characterize the industrial age as this short period in history when this perfect alignment occurs.

Slaves to work or ourselves?

At the centers of industrial capitalism, productivity increases rapidly. Proletariat becomes bourgeois. Men and women go to work, the opportunities for consumption expand, and each succeeding generation has material evidence of its evident success. Capitalism marches along, and measures its progress by milestones that—at a closer look—appear to be toasters, cars, nylon stockings, hot-water boilers, microwave ovens, blinking TV screens, and Barbie dolls.

The children of the Agrarian Age go to school, get educated, and land on middle-class public sector jobs, from time to time remembering their revolutionary youth, teaching their children the lesson they have just learned themselves: the importance of good education.

When we pass the turn of the millennium, the Age of Middle Class is now over. Work and education have become economic factors in the global equation. In a sense, the modern economy has now succeeded in fully detaching work from the human nature. Work has become a statistical problem, which we can get rid of by adjusting economic growth and the amount of money on the market.

From the economic point of view, however, we have no way of making a distinction between ponos and ergon. It makes no difference if we carry a stone from one pile to another, and back, or if we work to feed ourselves and our families. Economically both types of work may be as good. On the contrary, often it seems that when we do things that are meaningful for us, we are compensated less, in economic terms, as when we work to fulfill someone else's needs. Ask any modern poet.

Indeed, labor markets to some extent compensate for alienation, thus making meaningless work economically more valuable than work that directly addresses the needs of a worker. Moreover, when economic terms are used, it really doesn't matter whether work is done by humans or by machines, or whether some people work like slaves and the rest enjoy their eternal vacation on some distant tropical island. Here economic theory is blind like justice, but not because of impartiality. It is blind just because it doesn't care.

Paradoxically, however, the global system of economic competition requires today that jobs become inherently human. Those jobs that do not require human mind can be automated. Human workers are needed only where their creativity, knowledge, and commitment matter. If you want to argue that Marx is dead, this is the right argument. Today people spend a lot of effort and get a lot of training to make their work meaningful for them.

Jobs that require creativity, knowledge, and commitment have become important sources of meaning and identity. In modern times, we don't work for gods or other people who have taken the role of gods. Instead, we work for ourselves. Or, more exactly, we work our selves. Work has become one way to produce and reproduce our identity and social location. As a result those who are lucky enough to have such golden opportunities work more than ever before. There is no clear distinction between work and leisure anymore. Today we, as workers, have become our own slaves.

The problem with a formal educational system and exceptional competence

Modern planners often see the problem in matching worker competences and the needs of economy. Vocational education is sometimes like a production machine that eats raw material and spits it out to fill the needs of the every-hungry and inconstant market. I don't believe optimal production planning is a major problem. Maybe planning works for non-discretionary and alienated occupations, but it probably needs to be reconsidered for discretionary jobs where education plays a different role. In general, there is no way to systematically upgrade worker competences so that they would answer the needs of global competition. To be better than their competitors, firms need exceptional compentences. When the educational system eventually adjusts to produce skilled workers, they are not exceptional anymore. At least there is the risk that demands for skill levels grow faster than any pool of these skills. Although there may be local concentrations of skill that create local competitive advantage, in the long run these advantages easily fade away. These are the days when relative advantage is the only advantage, and being the fourth doesn't count. If we study the development of work compensation and income differences, I think we can see that the global economy pays for exceptional skill that is in short supply, and not for absolute levels of competence.

In this situation, the best way for a worker to generate exceptional compentences is to be where new knowledge is created. Indeed, learning by doing is rapidly increasing its importance. Today, ergon is an important form of schole. Learning opportunities and work opportunities have become interdependent. We don't really understand the implications of this for the educational system. How do we manage the system of competence development if private firms control the best competence development opportunities? How do we measure skills when Microsoft holds the certificate?

Experiential products the fastest growing segment

Technology has the important characteristic that it accumulates human learning. When we develop new machines and tools for production, we always build on the best existing foundation. In essence, we multiply our previous results when we improve our best current technology. This, in practice, means that technological development is exponential. At the same time it means that no human–however competent he or she is–can compete with technological progress. There can be no human worker who could become twice as fast every 18 months, have twice the number of neurons every 16 months, or fill one fourth of previous physical space every three years. For technical artifacts this, however, is possible.

The paradox of information society is that we assume that the only sustainable way to create new jobs is by creating them in exactly those areas that increase the speed of technical development. We associate technical development with economic development, and economic development with social development. This association is derived from economic theory and the religious belief that work is part of human destiny. To be a legitimate member of modern capitalist society, people have to work and earn their living. When agricultural and traditional industrial jobs disappear, people, therefore, have to move to those jobs that characterize the modern society. And what, indeed, would be more modern than the new wonders enabled by technology?

When we try to predict the future of occupations and educational needs we could, however, ask whether the nature of work is changing. Maybe the economic aspect of labor is diminishing in value. Maybe we should think praxis and poiesis, in addition to ponos. After all, implicitly we have been talking about occupations: our identity and place in the social space.

I think Marx got it wrong also because he believed that alienation of work can be understood as a relation between worker and capitalist. Today, the consumer plays an important part in the transformation of work. Both capitalists and workers do what the consumers want. This closes the equation in a way that Marx couldn't have seen. In varying proportions we all are consumers, capitalists, and workers.

From this perspective we can predict that there are three major forms of work that will grow fast in the future. We could call the related products and services informational, transformational, and experiential. Sometimes the new products are clearly in one segment, but often they package several aspects of the new economy into a single product. They all help the post-modern consumer to integrate his or her identity back into a unified personality. Informational products provide us with tools to make sense of the world around us and coordinate our activities in it. Transformational products, such as education, bodybuilding, health food, therapy, and trendy clothes help us transform our bodies and minds. Experiential products are probably the fastest growing segment. The modern world is rapidly becoming a Disney World.

I think André Gortz made a valid point in the 1970's when he, in essence, proposed that we should combine ponos and poiesis, so that every member of the society has his or her fair share of them. Such a social zebra-model would mean that social stratification occurs within each individual member of the society, and not between people. The stripes of the zebra should be visible both when we observe human life on its everyday level and across the lifespan. The various forms of learning and work should be interlaced. This, of course, requires major reforms in our institutions.

Networks and new learning environments

Vocational education is becoming, for example, a key component in the overall competence and knowledge generation system. In the process, the boundaries between organizational development, learning, innovation activities, and academic and industrial research become increasingly difficult to find.

As Manuel Castells has noted, today the global system is a network filled with holes. This is true also for competence networks. You can be close to the nodes of the network and yet disconnected. Although we now live in a society that can be characterized as multiple overlapping networks of communication, exchange, production, power, and trust, there is a clear tendency of these networks to become aligned. If you are a node in one of the central networks, you tend to be a node in all of them. But if you fall through the net, you tend to drop all the way.

One of the most fundamental networks for human beings is the network of communications. The resource in short supply in the future is access to meaningful discourse. When you are linked to the system of social meaning processing, you know how to interpret the world and what is relevant in it. Furthermore, the access to communication networks enables you to continuously update your knowledge and maintain your competence. As the socially relevant stocks of knowledge are constantly changing, formal education easily becomes just a means to get ahead in the social queues. When that happens–or did it happen already–formal education will have a hard time competing with the real producers of new vocational knowledge, such as Microsoft, IBM, or SAP.

Indeed, some of the socially most interesting networks are today in areas where new technology is being developed. I think this is because of two reasons.

Social mobility happens fastest where there is a lot of movement. The constant revolution generated by innovation opens new opportunities. In the industrial society, social mobility was a process of accumulation and predictable progress. Today social mobility depends on your personal speed. Those who are fastest in dropping everything and grasping the unpredictable opportunity move fastest up the social ladder. Silicon Valley, as a region, has made an institution out of this. It is full of successful dropouts.

In this sense, labor market and formal education are losing their relevance. The new formula for success is to hang in a bar in Hollywood, Silicon Valley, or in the City. A good career seems more and more obsolete an idea. People are trying to hit the jackpot and economically it makes all the sense to stand next to the machine if you want to win. The high-tech labor market is now much closer to the stock market than it is to the traditional industrial job market. People select their jobs based on intellectual and economic options, and these become increasingly intertwined.

The domain of technology development is also interesting today because of this tight linkage between economy and technology. Economic growth and technical development are fundamentally related. The global economic system has already for some time essentially covered the whole globe, and there are not many economically interesting peripheries left for economic expansion. Technology, however, constantly creates new regions for economic activity. Innovation breaks the boundaries of economy, and allows it to expand. Furthermore, the speed of growth can be fastest in these new areas of development. This, in turn, means that global capital flows into such areas of rapid growth, accelerating the speed of change further.

Questions for the future

There is nothing inherently wrong with change. We should note, however, that in the current economic system there are no obvious mechanisms that would automatically and optimally adjust the speed of change. On the contrary, one can argue that it is exactly here that the markets don't work. This is because the economic system has a tendency to make those people irrelevant who are not able to move fast enough. The economic system heavily over-counts those who move at the pace of the economic frontier. By definition, however, a frontier is a boundary that can be occupied only by a few.

This is the modern world. Of course, we should ask whether this is a socially, economically, or psychologically sustainable model. This is why even the most committed market liberalists have to think about the division of surplus, be it intellectual or material. A society where citizens queue for a small number of lottery tickets has a very different future than a society where different meaningful opportunities exist in abundance. This, of course, is why politics is becoming increasingly important in the network society. At the same time we bring the social back to economy. My guess is that the end result is a profound change in our economic theories, and social institutions. My message, therefore, is that we should critically evaluate our concepts of work and competence when we try to understand the future challenges and opportunities.

What, indeed, is the role of knowledge and competence in the modern society, and how the formal system of education addresses the current needs of people? What is the link between technological and social change? How do we plan to keep the network tight enough so that the global and local in the world remain parts of the same world? How should we re-conceptualize work? What is the role of vocational education and training in a world where most learning and knowledge generation happens in work? Is there still a role for it?

It is my guess that these questions are no more just philosophical or theoretical questions. Instead, they are very practical questions. They look big, maybe even too big, just because they are so central in our current world. Our attempts to answer them will enable us to address some of the challenges they imply.

Mr Ilkka Tuomi

MODELS AND PRACTICES OF WORK-LINKED TRAINING IN THE EU MEMBER STATES

Mr Johan van Rens

Introduction

Ladies and gentlemen,

We are currently experiencing a very fruitful and innovative period as regards the development of practices and methods of work-linked training. In this presentation, I would like to deal with this topic under the following headings:

- Reasons for growth of interest
- EU influence
- Variety of models
- Emerging practices
- Common problems
- Recommendations
- Conclusions
- Growth of interest in work-linked training

Researchers have been exploring the pedagogical implications of work-linked training, in response to calls to make training at all levels more relevant to labour market needs. A growing volume of research results point to work-based learning as a good preparation for the modern workplace which is characterise by the need for independent work and decision-making, problem-solving capabilities, and taking responsibility for one's own work.

Worked-linked training introduces young people to communities of practice in which they learn by gradual increasing participation in the community or team. The social organisation and contact in the team enables the acquisition of tacit skills - social, behavioural, interpersonal, communication skills - essential elements of training not easily transmitted in the classroom situation. Today's complex work processes can only be satisfactorily understood through experiential learning

From a policy perspective, work-linked training is seen as a vehicle to improve transition from school to working life and to give greater access to first employment. The NAPs, in particular, recognise work-linked training as a key to enhancing the employability of youth and adult unemployed, and other disadvantaged groups who have problems making the transition from school to working life.

Countries with a Dual System have lower rates of youth unemployment (Germany, Austria, Denmark). However, they have highly regulated training and labour market systems which allows smooth transition, and this model is not readily transferable to freer labour markets.

Judged on its socio-economic benefits, work-linked training provides suitable experience for all students and the costs are shared with the companies. Some countries find it beneficial for the reintegration of unemployed. A further reason for the growth in work-linked training is the belief that it is more saleable to weaker ability students and those less motivated to stay on in education. According to the NAP Guidelines, unemployed (youth and adults) are to be offered a new start before reaching 6 months of unemployment, in the form of training, retraining, work practice, a job or other employability measure. The Member States are responding: Trace (France); New Deal (UK); back-to- work traineeships (Luxembourg).

EU influence

In the Leonardo da Vinci II Programme (2000–2006), the original 19 objectives have been reduced to 3. Objective 1 states that improving the skills and competence of people in initial vocational training may be achieved inter alia through worked-linked vocational training and apprenticeship, with a view to promoting employability.

The Council Decision (Dec 98), European pathways in work-linked training, is the most recent initiative to encourage the effective linking of work experience and training. It introduces a EUROPASS to document trainees' periods of training abroad and their training progress. This could have some positive effects on the recognition of work experience ana non-formal.

ESF funding, as well as financing work-based schemes and traineeships, has been used to develop an apprenticeship system in Portugal and has made it possible in many countries to finance the off-the-job part of apprenticeship training (e.g. Greece, Ireland, Portugal). In the NAPs which I have referred to and will come back to often, all countries have made provision for allocating some money to developing training, usually with a work-linked component, to improve employability and transition.

Many of the projects funded under Leonardo da Vinci I have had elements of work-linked training as their main theme, subjects such as:

- improving apprenticeship to incorporate the needs of industry;
- strengthening cooperation between industry and educational establishments and, hence, improving the relationship between on and off-the-job training components;
- use of apprenticeship to improve the chances of entry to working life for disadvantaged group;
- development of transnational modules, course material and exchanges. In general, placements abroad for trainees have been on a much smaller scale than in higher education. Even taking other programmes, like Youth, into consideration. Denmark is an example of good practice where the PIU-scheme has been developed to en-

courage and organise placements abroad. CEDEFOP is currently studying how this can be encouraged in large enterprises, taking the example of BMV-Rover;

- *networking at sectoral and European levels.*

Development of varied models

APPRENTICESHIP SYSTEMS

Apprenticeship is the traditional method of linking VET and the world of work Statistically seen, apprenticeship is still the most important form of work-linked training. It is also the most structured form comprising three elements, now common to all Member States (in various forms): a contract, a school-based component, and a work-based or practical component. Apprenticeship is strongest in traditional craft and industrial sectors. We have no common terminology to describe sectors throughout Europe but, if this were the case, construction, engineering and commerce, would be the top three sectors.

Apprenticeship is still being developed Italy undertook reforms in 1999 which included offering apprenticeship to students affected by the obligation to take part in education and training activities up to the age of 18. Modern Apprenticeships have been introduced in the UK and Sweden is introducing apprenticeship.

In Germany, Austria, Denmark, the 'dual system' of apprenticeship is the main pillar of the initial vocational training system and it attracts a high percentage of young people. It is a highly regulated system both in relation to its content and operation. Agreement is reached on each training occupation with the social partners. After a steady drop in numbers in Germany over the past decade, entrants were up by 2.3% in 1997. In Denmark, decline is caused by young people's dissatisfaction with the system, among other reasons.

In Norway and Sweden, apprenticeship is developing from within an integrated, school-based initial training system. Sweden is the latest country to pilot a 'new modern apprenticeship model', within the framework of upper secondary school, which should become permanent from August 2000. In the UK, France, apprenticeship is part of a very mixed provision, as will be seen presently. The Netherlands which also has a mixed system is interesting in that efforts are being made to bring supply closer to the labour market needs by providing work placement in both the school-based route - BOL (20%) and apprenticeship - BBL(60%). With the exception of Portugal where each occupation covered by apprenticeship is regulated separately, apprenticeship arrangements in the Mediterranean countries are largely adhoc and numbers participating are low.

WORK PLACEMENTS WITHIN SCHOOL-BASED TRAINING SYSTEM

Apprenticeship is by no means the sole option. Partly because of the highly regulated social structures it needs to function well, many countries have devised alternatives based on their existing training traditions and systems. France is perhaps the best example of a mixed system. Alongside apprenticeship, it has over the years developed the vocational baccalaureate for students in upper secondary school who intend to prepare for employment, it includes 16 to 20 weeks on-the-job training over two years. Other countries have followed this example, in the UK the GNVQ, in Ireland the Applied Leaving Certificate, Sweden's 14 vocationally-oriented programmes in upper secondary education devote 15% of student's time to APU (workplace training). Agreement has been reached in Finland to provide periods of on-the-job training of at least six months for all upper secondary school students. Now the question is how to generate enough places to develop a 'culture' of on-the-job training. In Greece, students at the post-secondary Institutes of Vocational Education and Training have a six-month practice period at the end of their courses in many industrial and other sectors.

ALTERNATING SYSTEMS OR "ALTERNANCE"

France is also the home of alternating systems or 'alternance'. It offers a wide range of initiatives, all of which involve a contract between the youth and employer. The contrat d'orientation (guidance contract) is for young people aged 22 and over who do not have a vocational diploma and who have not completed upper secondary, general education The contrat de qualification (qualification contract) is offered to young people under 26 to supplement their initial training by job-related training to give them better possibilities of access to jobs. The contrat d'adaptation (adaptation contract) is aimed at young people under 26 to provide training that will help them adapt to a job or type of job.

Such models and others have also been adapted in other countries. In Denmark, TAMU is an alternating vocational preparation programme for youth with low attainment and social problems, and the municipalities organise other schemes to combat unemployment, e.g. job-training schemes with public employers. Portugal has the PAIJVA programme for the integration of young people into working life. The UK's New Deal for Young People 18-24 allows for various combinations of work and education. NAPs' Guideline 1 - Tackling Youth Unemployment - provides Catalyst for such schemes.

PRACTICE-ORIENTED SCHEMES

These practice-orientated schemes are based either entirely in educational institutions as is the case in Spain and Denmark or entirely at work as in Italy. They do not have an alternating feature but place emphasis on the work element. Spain is using its workshop schools (escuelas taller) and training centres (casas de oficios) to develop work-linked programmes for under-25s and has created the new Employment Workshops Programme (talleres de empleo) for over-25s. Similarly in Denmark, production is used as an educational instrument to initiate training in the Production Schools. Italy has the contratto de formazione-lavoro, a work-training contract, lasting up to two years during which all learning takes place at work.

At European level, EUROPEN - the network of Practice Enterprises - encourages this type of learning throughout its European network.

Emerging practices

Practices are developing in the Member States which are common to or have an influence on all these types of work-linked training, some of which I would like to look at now. Many of the examples I will use here are taken from apprenticeship, as this is the area of work-linked training most studied by Cedefop to date. A full description of the apprenticeship systems in all Member States can be found in the Electronic Training Village(ETV): http://www.trainingvillage.gr/etv/library/apprenticeship/main.asp (this direct link works if you register as a user of the ETV).

SOCIAL PARTNERS

It is now usual for the social partners to take part right from the planning stage through to the awarding of certificates. This is true especially of countries with a 'Dual System' but also in Scandinavia. Portugal and Greece have tripartite committees involved in apprenticeship, while in Italy and Spain collective agreements have been concluded on training contracts, etc. In Denmark, Finland and the Netherlands, trade committees (under various titles) play a decisive role at sectoral level. Also in Germany and Austria, each new traineeship is negotiated among the social partners in the relevant sector or branch.

Throughout the EU, trainees rely heavily on SMEs for their introduction to the workplace. Even the UK, where traditionally large enterprises took on most apprentices, 58% of Modern Apprenticehsips are located in companies with less than 25 employees.

GROWTH OF SERVICE SECTOR

Although apprenticeship is increasing in the business sector (banking, finance and insurance), hospitality and care sectors, its growth is not keeping pace with the service sector growth on the labour market. It is often criticised for its failure to provide skills for newer types of work.

Given the nature of ICT jobs, they certainly require training which has a practical, experiential component. In general, the ICT sector favours shorter, tailor-made traineeships. Finland is an exception in that the Technology and Transport sector is the most popular among apprentices. In the UK telecommunications is a growth area in Modern Apprenticeship. Indeed, in the fields of information and communication technology and the media, an increase in apprentice intakes has been experienced in Austria and Germany due to reforms in the dual system which adapted courses to suit these sectors. However, Sweden's plans are to offer the apprenticeship option in national programmes for craft subjects. Most countries emphasise that ICT should be an important component of curricula and that companies taking on trainees should have good equipment.

In Finland, legislation was amended to provide apprenticeship for entrepreneurs. VIZO, the Flemish institute for training in the handicraft sector, has designed a new contract to link entrepreneur training with practice. Young people in Belgium, of 18 and older who have finished school can sign a practice contract which combines practical training in a company with entrepreneur training in a VIZO centre.

FLEXIBILITY AND BREADTH

Much of vocational education and training and apprenticeship in particular was traditionally compartmentalised, based on a Taylorist concept of work organisation. Still today, once an apprenticeship is chosen it is highly institutionalised and the individual has not much room for manoeuvre as many of the curricula have been pre-set. This goes against the tendency towards more flexibility and individualisation of training and work.

In Denmark compartmentalised training paths are blamed in part for the high dropout rates because they lack transparency and confuse youth. The number of VET programmes available at entry will be reduced from 83 to 7 and some schools are practising this policy from August 1999 on an experimental basis. In contrast, in Germany, debate continues on training for 'regulated occupation' versus more generalist training which can be used for a variety of occupational fields. Even in new sectors, the DGB considers that some of the newly developed regulations might result in over-specialisation.

Systems are becoming increasingly flexible so that the needs and interests of both the companies involved and apprentices can be better taken into account. Modularisation is increasing (e.g. The Netherlands, Finland, Ireland, UK), a feature which is vital to allowing for the development of more individualised provision. This also calls for recognition of prior and non-formal learning as the intake of adults with previous experience grows.

OLDER TRAINEES

Nowadays, many countries tend not to have upper age limits for entry to apprenticeship and encourage it as a route for adults.

Norway and Finland offer shorter apprenticeships to job seekers or workers who wish to fill gaps in their prior experience and obtain formal recognition of the skills and knowledge they have acquired during working life. Modular courses are offered to complete a qualification through apprenticeship and this is also extended to full-time employees in Norway. In Ireland, an ESF report criticised the lengthy apprenticeship and the rigidity of access to traineeships, two factors which hinder adult participation.

AFPA (the national association for the training of adults in France) signed a second five-year 'progress contract' in January 1999. Amongst the agreed objectives are the establishment of individual training contracts regulating entry to vocational training qualification measures between AFPA and the unemployed and increasing the number of adults participating in State-financed vocational training. Luxembourg has similar back-to-work traineeships for unemployed adults, also comparable with the New Deal for Unemployed in the UK. The NAPs are encouraging work-linked training for over 25s in the Member States.

HIGHER EDUCATION

Modern universities are realising the benefits of placements during studies. The two newest universities in Ireland, Limerick and Dublin City, maintain the practice of sending students on placements introduced when they were both 3rd level Colleges. Some industries are also setting up their own universities to deal with lack of action on the part of traditional universities, though this is more common practice in the USA than Europe. Graduate apprenticeships are to be designed jointly by national training organisations and universities or colleges in four pilot sectors in the UK.

Work-linked training at non-university tertiary level is much more widespread with the Netherlands leading the way. Higher vocational education (HBO) is offered as a dual training route that combines work and learning in various ways. Its success is dependent on the close relations which exist between HBO colleges and the labour market. Tax relief for employers for each student taken on is available as an incentive in the technical and economic sectors. It is a progression route for secondary level apprentices to higher education. Sweden is expanding the pilot project which in 1996 launched a new form of post-secondary, advanced vocational training (QVE), in which one third of tuition time is spent in the workplace. Similar possibilities exist in the UK's further education colleges and NVQ level 4, and in colleges of technology in Ireland. Discussion is taking place on the extension of apprenticeship-type schemes to polytechnic education in Finland which already includes 20 study units spent at work.

Common Problems

Funding of work-based training is a contentious issue between State, the employers and other social partners. In Member States generally, there is a problem when it comes to adequate company participation. To overcome this problem, most countries offer companies some kind of tax incentive for providing placements for apprentices.

In three countries, Denmark, France, and Ireland, there is a training levy on companies which is aimed at spreading the costs more equally, even among those companies which do not provide apprenticeship training. In the UK, experiments are underway using youth credits or vouchers and student loans. By abolishing higher education grants in favour of loans, an attempt is being made to treat all students equally, regardless of the type of education being pursued. In Sweden, the new apprentices will have the same entitlements as other upper secondary pupils. They will not be paid during their work-based training.

Trainee wages become an issue when adults are involved, one of the reasons why adults were excluded from apprenticeship for so long, despite it being a type of training in which many adults would feel at home. 'Workfare' type arrangements now make it possible for trainees to continue to receive unemployment benefit during training.

Apprenticeship is still problematic as a means of moulding lifelong learners because for many apprentices the road ends with apprenticeship and they are denied access to higher vocational or university education. In the present environment of constant change in job content and work organisation, this is no longer a tenable state of affairs. Even in Germany and Austria where the apprentice could advance to the technician level of mastercraftsman, there is a realisation that the possibilities for progression need to be opened more for apprentices (who after all comprise between 40 and 60% of students at upper-secondary level education in these countries). Its attractiveness has been under threat and it has been losing out to academic upper secondary education. Attempts are being made to rectify this situation. In June 1998, the German Standing Conference of Land Ministers of Education and Cultural Affairs (KMK) published two resolutions which enables progression through VET to higher education. Austria and Norway have introduced exams aimed at bridging apprenticeship and academic education. But exams are not necessarily the best formula, a dual qualification is preferable which gives dual access to the labour market or to higher education. It exists in Sweden and arrangements also exist in Finland.

Some countries have introduced competence-based qualification systems (Finland, The Netherlands, United Kingdom and Ireland). Such systems recognise competence regardless of where it is acquired. They are based on outcomes, i.e. on what the trainee can do. They can therefore be applied to the school or to the workplace and credits can be accumulated in a range of ways or modules to achieve units of competence which together make up an individual's qualification. They can also be tailored to the needs of a company. The involvement of an outside assessor or examiner to ensure that common standards are being met is not used throughout the Member States.

The tutor or supervisor is responsible for the content, organisation (and usually for the continuous assessment) of the trainees learning while in the company. Monitoring and coaching of the work-based component differs greatly throughout the Member States. In all countries, the tutor is expected to be an experienced employee. In SMEs, it is often the owner/manager. In many countries, the tutor must have achieved, at least, the level of qualification which the trainee is aiming for.

France, Germany, Austria, have legislation dealing with the training of tutors/supervisors in enterprise. They must acquire suitable supervisory experience, as well as skills in pedagogy and tutoring. No obligatory training exists elsewhere but, in The Netherlands pedagogical training for in-company tutors is being provided by the sectoral or trade bodies. In Denmark, schools are offering courses in coaching techniques and some companies are organising their own courses. An ESF funded project ('96-'99), for on-the-job instructors in Finland was especially targeted at employees in SMEs.

Apprenticeship continues to reproduce traditional gender inequalities. It is still a male-dominated training route. While there is a gradual increase in female participation (in the UK figures have almost reached parity), it is not because more women are breaking into male-dominated occupations but rather, because more women are participating in service sector apprenticeships. Developments are merely crystallising the old gender divides, also in ICT training which tends to be male dominated.

A further downside for women apprentices is that, compared to their female counterparts who go through full-time vocational education, they also fair much worse when it comes to wages. The situation with regard to ethnic equality varies. In countries where apprenticeship is seen as a training route for lower performers, a large percentage of apprentices are from ethnic minority groups (France).

Equality is also addressed in the NAPs Guideline 16 - Tackling gender gaps - and Guideline 19 - Promoting the integration of people with disabilities into working life.

Recommendations

In today's society, change is happening more quickly then ever before and training must also react and adapt in tune. Developments should not be left to chance. Far-reaching reforms are needed to produce a 'holistic approach' to work-linked training. The following issues require common reflection by policy makers, practitioners and consumers:

- widening scope to include more sectors, e.g. ICT sectors
- providing multi-skilling and competence to continue learning throughout life
- facilitating new ways of learning for a changing society
- shorter traineeships for participants with previous experience
- courses tailored to the needs of different occupations
- increasing the flow of trainees in and between work-based and school-based learning paths
- developing a satisfactory system of on-the job assessment
- providing adequate recognition and accreditation of non-formal learning,
- improving training of in-company tutors
- promoting companies' willingness to host trainees.

Conclusions

Work-linked training provides a basis for lifelong learning. Alternating training set in motion a routine of moving between school and work which should be continued and built on throughout life. It enhances employment prospects, helps reduce youth unemployment, and facilitates transition. The right balance must be found between the school-based and the work-based elements, in order to serve a greater number of trainees.

The creation of more coherent European strategies for validation and certification of skills acquired through non-formal learning is underway. This will facilitate the assessment of learning during periods of work experience. CEDEFOP is working more generally on the development of mechanisms to recognise and validate non-formal learning, and this will be a priority under the forthcoming Portuguese Presidency.

The New generation of EU Programmes can make a vital contribution to expanding, developing and piloting new forms of work-linked training.

Mr Johan van Rens

COOPERATION BETWEEN VOCATIONAL EDUCATION AND TRAINING AND WORKING LIFE IN FINLAND - EMPHASISING THE STANDPOINT OF ON-THE-JOB LEARNING

Mr Timo Lankinen

Introduction

Vocational education and training in Finland is closely connected to vocational institutions. Institution-based vocational training began in Finland in the 19th century. At the turn of the century, vocational training was provided by institutions of different sectors, but the numbers of students participating in the training was insignificant. A system for extensive vocational instruction was developed after World War II. The number of vocational institutions increased and vocational training was transferred almost entirely to vocational schools and their workshops separated from working life. The significance of apprenticeship and other work-based forms of vocational education and training as a provider of vocational training remained marginal.

The tradition of vocational training in Finland deviates from many Central European models of vocational training, particularly as regards instruction given at workplaces. Vocational training - both the planning and administration of training and theoretical and practical teaching - has for long been concentrated in vocational institutions maintained by public authorities. The contribution of enterprises and working life in general to vocational training has only been additional.

In Finland, basic skills and competencies relevant to the world of work are provided principally by educational institutions. In particular Central European systems for vocational training are more advanced in implementing various forms of vocational training in the workplace, i.e. on-the-job learning. In making this kind of comparisons it is easy, however, to forget the background of the Finnish model. The Finnish system of vocational institutions has been affected, among other things, by the following facts:

- Economic situation after World War II, policies for industrialisation and labour market policy, and the Nordic model of a welfare state;
- Institution-based model is not very responsive to rapid changes in the economic situation or the labour market, e.g. during periods of economic recession;
- The model is believed to provide vocational skills independently of any particular employer;
- The objective of regional balance.

The institution-based model of vocational education and training is not entirely void of problems. Vocational training has been strongly criticised for its rigidity in the changes of working life in the 1990s. The focus of criticism can be summarised as follows:

- The functioning of vocational training provided without real contacts with he world of work has been questioned, and demand for more work-based learning in actual workplaces have been expressed;

- The poor correspondence between qualifications - knowledge, skills and competencies - produced by vocational training and the expectations of working life;

- The lack of cooperation between vocational education and working life;

- The stage of development of training for entrepreneurs and entrepreneurship;

- The transition from training to work has become more difficult.

Naturally, another problem is that we do not evaluate vocational education and working life together, using the same criteria. Each of them have their own roles in creating and maintaining professional skills and competencies and entrepreneurship, and the cooperation, partnership, between the parties is crucial. Neither educational institutions nor workplaces as such can offer an ideal environment for vocational training; they are both part of the culture where professional growth takes place.

Convergence between vocational education and the world of work

One of the main challenges for the development of vocational training in Finland is the convergence between vocational education and training and the word of work. The 1980s could be described as a period when the supply of education increased and an entire age cohort was secured the possibility for vocational education and training; the focus of development was inside the education system. In the 1990s, the economic recession and a new view of the relationship between vocational education and working life have transferred the bias of development closer to working life. In the national education policy, improving the compatibility of vocational education and the needs of working life has become the central challenge.

These are the reasons why our national agenda includes

1) increased share and strengthened standard of on-the-job learning at all levels of education and training;

2) Expansion and improvement of apprenticeship training.

In addition to the measures mentioned above, cooperation between vocational education and working life has been strengthened by the following actions:

1) The participation of actors of working life in the development of vocational training and in anticipating the needs for education needs has been improved e.g. by the reform of the vocational education and training committee system. New education and training committees have been appointed for the term 1998-2000. These committees, operating under the Ministry of Education, are tripartite bodies represent-

ing the actors of working life. Their role is to participate in the development of vocational training e.g. by monitoring and anticipating the development of professional requirements and occupations in business and in working life in general, and to make assessments on the development of the supply of education based on the demands of working life. Education and training committees provide an opportunity for improving the relations and anticipation between national and sector-specific education and working life.

2) The anticipation of needs for education has been improved.

- Anticipation refers to evaluating changes in working life from the perspective of vocational training. The basic purpose of anticipation is to improve knowledge, skills and abilities, the qualifications of workforce. Anticipating the future demands of working life aims at producing an appropriate amount of know-how with the appropriate content, at the appropriate time. The other side of the anticipation system also comprises the development of the structures and contents of education, and the regulation of education supply in accordance with the needs of working life. Anticipation is not a separate measure but an essential part of the development work.
- Anticipation concerns all levels of education. It is important that decision-makers, the central administration and the providers of education and training have a nation-wide supply of sector-specific, high-quality anticipation material at their disposal. The role of education and training committees is central, as is the role of the National Board of Education, which should support the providers of education in the process of anticipation.
- In the same way as the education and training committees provide anticipation information for sector-specific and national needs, local authorities - Provincial federations, the Employment and Economic Development Centres and Provincial state offices - may also express their opinions on the development prospects of their region. In the light of this information, the providers of vocational education and training produce workforce according to the needs in the region. In developing anticipation, a particular weight is put on the transparency of the arrangement: the information produced should be accessible as widely as possible. Specifically in regional anticipation the roles and targets of different actors become accentuated.
- The main principle in the development of anticipation is that anticipation should be a part of the development of the workforce's knowledge and skills - the division of work in anticipation should correspond to the division of work in producing knowledge and skills. The main focus of anticipation should be on the sector where the majority of qualifications for education and working life are produced: in the cooperation between enterprises and providers of education.

3) The decision-making power has been largely shifted to the providers of education and training esp. in matters related to the supply of education and training. This means that the role of these institutions in taking care of the needs of the labour

market. The providers of education bear great responsibility and accountability of making the right decisions. They must react actively to the qualification demands of working life. At the beginning of 1998, a reform for simplifying the regulation of supply of the upper secondary vocational education and training entered into force. The reform increased significantly the independent decision-making power of providers of education in matters relating to the supply of education.

4) The creation of the polytechnics system (non-university higher education) is structurally the most significant reform in the Finnish education system in the 1990s. The reform is a structural change of vocational education, through which some sectors of vocational education are upgraded to the level of higher education. The transformation of vocational colleges to higher education institutions with an emphasis on vocational education has been and still is a demanding process. The purpose of the process has been to raise the standard and quality of education. The target is that some 65 % of the age group are offered access to a university or a polytechnic. As regards on-the-job learning, the 4 to 5-year polytechnic degrees include six months of practical training. In some of the production-oriented degrees the share of training is twelve months. A Finnish polytechnic degree cannot be achieved through apprenticeship.

5) After the polytechnic reform upper secondary vocational education and training has gained status as a priority in the national education policy. Business life, and working life in general, needs skilled workers with modern skills and competencies. Innovative management, planning staff and product development, and skilled workers are needed to ensure a balanced development of working life and to improve the level of employment. In order to encourage this kind of development, the Government made a decision on measures for improving the attractiveness and appreciation of upper secondary vocational education and training in May 1997. The programme of the new Government this year follows this decision.

6) The education and training of adult population as a means of maintaining and renewing the resources of knowledge and skills becomes accentuated with the ageing of the population. In this situation, lifelong learning gains importance. On the other hand, the principle of lifelong learning is not applicable only on the education of adult population; the attitudes and abilities for continuous learning are adopted during early stages of education. At the same time, encouraging lifelong learning means accepting the recognition of earlier studies, expanding the adult population's possibilities for initial and continuing vocational training, providing competence-based qualifications designed to respond to the needs of working life, and offering new forms of support and incentives during studies.

7) The system of competence-based qualifications, geared to recognising earlier professional experience and education, was introduced in Finland in 1994 and later

developed to cover almost all fields of study. The qualifications are originally designed for working adults. The system enables demonstration of the acquired knowledge and skills in tests of competence, independently of the manner in which the skills and competencies have been acquired.

8) On all levels of education and training, education should be included in joint projects for the development of enterprises and working life in general, and it should support product development, small and medium-sized entrepreneurship and networking.

9) The educational institutions' responsibility for the students' future employment is emphasised. Higher education institutions and vocational institutions, together with labour administration, have established career and counselling services for facilitating job placement. In the first stage, the services were introduced in universities; during 1998 they were expanded to cover the polytechnics, and the in last stage the services will be offered in the major part of vocational institutions.

Enhancing on-the-job learning and apprenticeship training

Changes in the labour market and in the work process have lead to a revision of the form and content of vocational education and training. As regards the content, on-the-job learning is becoming more and more important. The training provided by educational institutions cannot provide the necessary knowledge about the new qualifications, the relations between individuals and the labour market, or between individuals and their work. Training must take place at work. In this sense, the Finnish education system has partially ignored the needs of working life; the actual professional skills needed in working life have remained deficient.

Efforts are made for tackling this problem by

- *increasing the amount of on-the-job learning on all levels of education*

The qualification reform of upper secondary level vocational education and training will be implemented in 1999-2001. The preferred duration of qualifications is three years, and each of them includes a minimum of six months of on-the-job learning. The new qualifications are aimed at ensuring that the school leaver has extensive basic skills for different duties in the field, as well as more specialised professional skills and competencies in one sector of the field. The qualifications should enhance the transition to work immediately after training, and ensure mobility and flexible transferring from one task to another in working life.

The objectives are based on the idea that professional skills and competencies, which cannot be instructed at school, can be learned through work at the workplace, and that these skills also facilitate learning at school. The objective is that learning in the educational institution and at work supplements each other. The new concept of on-the-job learning is also geared to pointing out that it is an essential part of a vocational qualification: a part of the instruction is obtained at work. The change is both quantitative and qualitative and it presents a new situation for working life, educational institutions and teachers.

- *increasing the use of apprenticeship*

The position of apprenticeship training in the education system has strengthened both as an alternative channel of vocational upper secondary education and training, and as a form of on-the-job further education used in working life. Apprenticeship has become a substantial part of vocational education and training; in addition, its specific instructional and educational features are being utilised. The volume of apprenticeship education has quadrupled during the 1990s, and it amounts to 10 % of all those who start upper secondary vocational education. In addition to this, apprenticeship training as a form of further education will be increased.

The position of apprenticeship as an alternative form of secondary education has become stronger. Similarly, the utilisation of apprenticeship has gained ground in working life as a form for providing further training for working adults as a new form of personnel training. Apprenticeship training of unemployed young people has been supported under Objective 3 of the EU Structural Funds during the period of 1995 - 1999.

Challenges of on-the-job learning

Both apprenticeship training and on-the-job learning included in vocational education and training represent progress towards achieving the target set: vocational education and training is partly transferred to the workplace.

On-the-job learning is a new challenge in particular for the educational institutions: a part of the training is transferred to enterprises and other workplaces. The development is not, however, to be led only by the educational institutions: development work demands close cooperation and partnership between educational institutions and enterprises. Vocational education and training in Finland is in transition towards a less institute-based form of instruction, offered jointly by educational institutions and workplaces. The role of educational institutions will, however, remain important.

The organising of on-the-job learning raises many questions, even problems, the solutions to which can only be found through experiments and practical cooperation between the parties involved. These questions include, inter alia, the following:

- How could the instruction provided by educational institutions and on-the-job learning be combined in such a manner that the whole process will be successful and correspond to the qualification requirements? The expectations of employers and working life must be taken into account in the planning of curricula.
- How to provide a sufficient amount of positions and places for on-the-job learning? The cooperation partners should be healthy and functioning enterprises. The

student should also acquire a thorough awareness of the tasks and entrepreneurship in the sector. The student is learning a profession, applying the skills acquired and also offering a personal contribution to the enterprise. Different views should be coordinated; the employer should benefit from the student's work, but the student should not be seen as free workforce, a solution for staff shortage.

- How to draft a set of rules for the educational institution and the employer and ensure that the student is aware of it and approves it? Here, apprenticeship provides an exemplary model.
- How to inform the personnel of the enterprise in order to prevent suspicion at the workplace and ensure the student best possible guidance in professional skills?
- How to arrange time for counselling and evaluating at the workplace? The educational institutions should also reserve specific resources for guidance of on-the-job learning. A regular contact between the study counsellor, the employer and the student is crucial.
- How to assure the quality of on-the-job learning?
- How to communicate to the students that on-the-job learning is an integral part of the qualification? The student is in an equal position with other workers at the workplace, which should show in his/her contribution to the company. The student should feel responsible for the work. He/she is a marketing agent both for himself/herself and the educational institution.

Many questions remain open, but through cooperation on-the-job learning is becoming productive and the answers will be found. The process benefits all parties involved. On the other hand, the process shall be constantly evaluated and adjusted in order to create a functioning model for a new form of vocational education and training.

Finally

Multiplying the jobs available for students is a challenge of on-the-job learning. For promoting on-the-job learning of young people, the central labour market organisations, the Association of Finnish Local and Regional Authorities, entrepreneurs' associations and the State signed in 1998 a recommendation in reiteration of their commitment to the project. To enhance the links between vocational education and working life, government and social partners´organisations signed a "social contract" in which they recommend that educational institutions and their owners, enterprises and other organisations and public administration should together investigate all the possibilities to organise vocational education and work placement opportunities. On-the-job learning ensures the supply of a new generation of workforce for enterprises. The average age of the enterprises' personnel has risen significantly, and the size of younger generations has decreased. Although unemployment in certain fields is still on a high level, enterprises are already experiencing difficulties in recruitment in the rapid economic growth. We can rest assured that the availability of places for on-the-job learning will be secured, since different sectors of working life will even compete for young and skilled workforce showing commitment to the sector.

In the implementation of on-the-job learning, all parties concerned have expressed their readiness for partnership. The change is remarkable. It entails, in a way, a rearrangement of the entire sector of vocational education and training. Until now, vocational training in Finland has not been steered by a system, which would have enabled the construction of systematic cooperation between education and working life. On-the-job learning is a possibility of fuelling cooperation between the different parties. Their task is to produce professionals to secure the development of business life, working life, national economy, and the welfare of the nation.

Particular attention in the implementation of on-the-job learning should be paid on

- Informing the actors, i.e. enterprises and other organisations of working life, social partners, educational institutions and providers of education, teachers and students. The demand for information is overwhelming; yet another challenge for cooperation.
- Training the teachers and instructors at workplace.
- Disseminating experiences and good practices.

Through the reform of on-the-job learning the Finnish vocational training is shifting towards a dual model of vocational education and training. The compatibility of education and working life will be improved. Through on-the-job learning, a part of the responsibility for the future is transferred to working life. This entails that working life participates in bringing up a new generation to the labour market.

Mr Timo Lankinen

FORUM 1: EUROPEAN PRIORITIES AND PERSPECTIVES IN COOPERATION BETWEEN VOCATIONAL EDUCATION AND TRAINING AND WORKING LIFE

FORUM 1

INTRODUCTION TO THE FORUM

Mr Roland Østerlund

Distinguished experts and delegates. It is a pleasure to welcome you to this afternoon's session. I wish to thank the Finnish presidency for the invitation to chair this important and interesting Forum on "European Priorities and Perspectives in Cooperation between Vocational Education and Training and the Working Life".

In my home country – Denmark – we have a tradition of work-linked learning reaching more than 400 years back in history. As a matter of fact: The tradition was work-based learning until 100 – maybe 150 – years ago, when the work-based learning was supplemented and complemented by school-based education.

Forty years ago, when I graduated from my apprenticeship, the school component was small and based on evening classes. Today, the balance between the two components is more equal, and often the issues discussed reflects a view in which the school component is the basis and the work component is the supplementary part.

If I should try to synthesize my experience from 23 years of work in this sector, I think it is fair to say that maintaining and developing a modern VOTEC-system takes a lot of persistent hard work, combined with dedication and inspiration – also form the international community. In addition, you need the cooperation and support from all the stakeholders.

As we have heard this morning, workplace experience combined with education can be important for a number of reasons.

It aids matching between employers and young people; it improves the quality of learning by making it more applied and relevant; it develops important work-related knowledge and skills; and it can have positive impact upon the firm as a learning organization.

Workplace experience and education can be combined in a number of ways. The dimensions along which they vary have a strong impact both upon the extent to which they are learning-intensive and upon the demands that they place upon the enterprise. As a result, their benefits to the parties involved may vary widely.

This is one of the reasons why a Forum like this is crucial. The exchange of experience – good as well as bad – is the basis for further development based on a shared knowledgeable.

FORUM 1

SYNERGIES BETWEEN FORMAL EDUCATION AND WORKPLACE LEARNING

Mr Albert Tuijnman

Introduction

The purpose of my presentation is to review possible synergies between formal education and workplace learning, particularly as they apply to new European settings. Specifically, my aims are to review global trends and their implications for education and workplace learning and to review significant education-system level trends and their implications for active labour market policy, continuing vocational training, general competence development and informal learning at work and at home. In conclusion I will point to the possible implications for policy analysis and development of major converging and diverging tendencies between formal education and workplace learning.

Setting the scene: Global and macro-level trends

The over-arching trend, of course, is globalisation. This is characterised by what may be called the 'triumph' of market capitalism and the further integration of various financial markets. Another aspect is 'managed' free trade in well-defined geographic and economic spheres such as those defined by the European Union. A further, rather obvious element in the equation is the advance in and spread of new information and communication technologies.

With globalisation come certain 'associated tendencies', some of which would appear to be desirable and amenable to policy design and others that would seem neither desirable nor reasonable or avoidable. The building of the larger 'unit Europe' and new supranational institutions such as the World Trade Organisation and the Western European Union can be considered examples of the former. At a dialectic level they represent both antecedents and responses to the still increasing pressures of globalisation. Other examples of what I call 'associated tendencies' are the continuing integration of capital and labour markets as reflected, amongst others, in high-profile corporate mergers and the continuing consolidation of financial institutions in Europe as well as globally.

Taken together, the tendencies associated with globalisation have diminished the economic as well as political power of the traditional 'nation-state'. Compared to the situation that prevailed during most of the post War period, governments today typically have much less scope to pursue and implement national agendas of decision-making in areas of monetary, fiscal, and even general economic policies. There are even mounting pressures on 'social domains' such as national labour market or health policy.

The tendencies and pressures associated with globalisation have major ramifi-

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cations; they constitute forces that in the extreme lead to the deconstruction and reconstruction of entire 'nations' and 'states' as we know them. In Europe, newly emerging 'nations of communities' such as Catalonia, Croatia, Kosovo and Scotland are a case in point. Other ramifications are the still on-going structural adjustment of labour markets, the calling into question – if not in doubt – of traditional 'welfare capitalism', the emergence of newly 'at risk' populations and hence the imperative of safeguarding and promoting social cohesion.

Governments know they need to respond to these tendencies and pressures. They are searching for areas where they are competent and where they can exert an influence on cohesion, competitiveness and especially 'comparative advantage'. What are these areas? Potentially there are many, of course, but there would seem to be two that stand out as particularly relevant in Europe today:
First concerns human capital and human resources development. It is not a coincidence that we are witnessing the renaissance if not the 'absolute triumph' of human capital theory in the years immediately prior to the break-in of the 21st century. Not only has technology finally been taken out of the residual factor in classical production functions, but so has human capital – defined as the "stock of economically useful knowledge, skills, competencies and attitudes in the whole population" (OECD, 1998).

The second area concerns social and cultural profiling: The coming of age of ideas concerning "cultural capital" – established by Bourdieu and Passeron (1977), Dimaggio (1982) and numerous other essentially 'latin' representatives in the 1970s and 1980s – and "social capital", established and formalised principally by Jim Coleman in 1988.

The new notions, or perhaps more accurately, the new context and emphasis on the existing notions of human capital and social and cultural capital have led to at least three common policy platforms in the larger European sphere:
First, strong throughout Europe but particularly pronounced in the Nordic region, is the policy commitment to lifelong learning (cf. Nordic Council of Ministers, 1995). This commitment builds on a new appreciation of several well-know facts: Perhaps most importantly, that knowledge and skills – or human capital – is not synonymous with formal educational attainment. It is not just a case of how many years of schooling one has. Much of the controversy over human capital and the failure to achieve closure in the empirical literature on its value and the effects on employment and productivity growth is now ascribed to major errors in measuring stocks and flows and not to the inadequacy of the theory itself (Tuijnman, 1999). Obviously, "years of schooling" is a very bad proxy measure of the stocks of human capital available to an economy. Second, the skills once acquired in school are not static but appreciate and depreciate over the life span, and third, there are many economically relevant skills and competencies that are not learnt in a formal education setting but acquired at work and in various contexts of daily life.

The fourth, albeit emerging policy platform is being constructed around the realisation that a strategy for building a new infrastructure and programmes for lifelong learning presupposes a simultaneous strategy for building new, enabling infrastructures such as those for study finance and for information and communication technologies.

Trends in formal education

The focus on the enabling mechanisms for lifelong learning has led to numerous developments and innovations in the formal education system. At risk of oversimplification, let me summarise briefly what to me seem to be the particularly important ones. In doing so I will be drawing on my previous experience as an OECD policy examiner and official engaged in the design of the INES project on the development of international indicators of education systems. Some of the developments I shall briefly mention will surely be familiar to the audience, but perhaps there are some that are not. In such instances my observations will hopefully give ground for further discussion, by inviting us to venture forth into the 'contested territory' that much debate on lifelong learning represents.

Foundation education:

- Emphasis on foundation skills and 'cross-curriculum competencies';
- Rapprochement – if not outright integration – of early childhood education and care functions and primary education structures and functions;
- Emergence of more fluid boundaries between what were once completely separate structures of primary and lower secondary education;
- In secondary education, more emphasis on parental and individual 'choice';
- Definition of individual learning pathways, establishment of 'learning contracts';
- Not only steering by means or more recently by goals but now also, in the name of accountability, steering by achieved results and student performance;
- If not outright much less vocational specialisation than at least a new recognition of the central importance of certain 'theoretical' elements in the vocational curriculum – not least civics education and mathematics;
- Generally, there is a tendency to delay specific vocational preparation and to put more emphasis on general subjects and transversal skills in the curriculum – on the assumption that the best vocational education is a broad and general education early in life.

Higher education

- Vocational education is not being abolished or toned down in any way but, rather, its relative positioning is shifting from the secondary towards the tertiary or higher education stage. This move in the relative position of vocational education is well reflected in the revised ISCED-97 standard, as opposed to the now defunct ISCED-77 (the latter had no operational ISCED4!);

- There continues to be strong growth in enrolment in higher education, in some but not all countries belonging to the European Union. In certain countries in excess of 50 per cent of a young age cohort now continues from the secondary system on into some form of post-secondary education;
- At the same time as proportionally more young people continue on into the regular sector of higher education, that sector is also increasingly becoming the place of choice for the offering of 'adult education' to people of mature age – defined in certain countries as adults over 25 years of age;
- Growth in higher education is reflected not only in terms of the numbers of enrolled young or mature adults but also of the number and diversity of the institutions providing education at this level;
- As systems diversify and incorporate some of the functions traditionally served by institutions of adult education, the location of the offerings also becomes increasingly important. The important potential role of modern information and communication technologies notwithstanding, physical location remains a major factor, as evidenced in the establishment of large numbers of new regional colleges and universities in a number of countries;
- In quite a few countries, and not least as a consequence of the gradual rapprochement between higher education and the vocational education sector, one can observe tendencies towards the commercialisation of formerly isolated 'ivory towers', of privatisation and market economics, and of a new emphasis on the role and duty of universities in performing 'third party' services;
- A final development worth attention at this stage concerns evolution and growth in tertiary-sector distance education using new communication technologies.

Adult education

- Adult education is something of a 'rising star' in the education business. But in many countries it is still treated as a 'stepchild' both in policy development and in educational research;
- Much like higher education, the adult education sector appears to continue to diversify and grow. Lot of new actors, often private providers, are strengthening supply: real 'markets' for adult education are developing all across Europe;
- Adult education is maturing also a sector of educational provision: In several European countries the number of adult students is five times as high as the number of youth in formal initial education. The total number of hours of study for these adult students equals the total number of hours spent in education by youth;
- Adult education does not solely serve economic and labour market ends – the social and cultural functions are extremely important as well. In Finland, as in the other Nordic countries, this is self-evident;
- But the evidence for many European countries shows that much adult education is increasingly tied to the job and the work place. In some recent surveys over 80 per

cent of respondents in some countries consider that they take the adult education for job and/or career purposes (OECD and Statistics Canada, 1997);

- Over time, even though the number of participants in general and leisure-related adult education has increased in a number of countries in absolute terms, the share of employer-supported and job-related adult education appears to have grown even more rapidly;
- This dependence on workplace-related learning is certainly problematic in certain respects. Not least it calls into question some of the best practices that have been established in adult education by the popular movements.

A final point concerning adult education is that there is evidence, at least in a few countries with available data on previously outstanding rates of participation in adult education that the growth curve in adult education participation is either levelling off or even declining. There are at least three hypotheses to explain this phenomenon. First, it is possible that much of the growth observed in adult education participation rates during the first half of the 1990s was tied to a peak in the introduction of new information technologies in the workplace during that same period. It is conceivable that the social demand for course offerings related to the introduction of such technologies have since levelled off. The second hypothesis is that, particularly in countries with already comparatively high rates of participation in formal adult education, there increasingly is – or soon will be – a displacement of formal adult education by various forms of non-formal and informal learning. The third and related reason mayoe that the higher the rate of participation in formal adult education the more difficult it will become to sustain participation levels in the long run.

Trends in continuing vocational training and workplace learning

Let me now turn briefly to some, what I think are pertinent trends and developments in continuing vocational training and various forms of workplace learning.

Active labour market programmes

- Under the currently prevailing cyclical conditions there appears to be some disappointment with the effectiveness of active labour market programmes in meeting given objectives;
- As a consequence the demand is increasingly on consolidation and concentration on what are seen to be the 'core tasks';
- At the same time one can see, in certain countries with previously strong and proud commitment to active labour market policy, a gradual move towards a new policy stance that I would like to describe with the term, 'active education policy'. The upshot of this policy stance is evident in the presentation above of trends in adult education and regular higher education;
- In sectors where active labour market policy retains much currency one can

nevertheless discern a tendency that calls for a better integration with educational services, not only in terms of contents but also qualifications;

- There is further more a development afoot that calls for a functional integration of the information and guidance services offered by the employment authorities and the educational sectors.

Continuing vocational training and informal learning in the workplace

- Diversification and growth continue quite strongly in continuing vocational training;
- In limited sectors of vocational education there is a desire and a move towards less-formal structural solutions;
- The vocational training sector appears to have become more professional, perhaps as a result of the influx of new money following a rise in social demand, diversification in supply and increased exposure to conditions of market competition;
- There are still lots of market failures relating to a lack of information about the sector – about everything ranging from public and private financing, demand, supply, contents, quality, achieved performance and long range outcomes and pay-off;
- Some countries have launched experiments with innovative approaches to financing, including 'competence insurance' and 'individual competence development accounts'.
- Informal learning in the work place remains something of a 'mystery sector', in large part because of the dearth of general descriptive statistical information about the incidence, frequency, criticality and social distribution of learning opportunities.
- What do we need to know, what can the EU do to assist countries in overcoming market failures linked to the lack of information?

Convergence and Divergence

Formal education and informal learning at work have often been regarded as polar extremes, with formal education attempting to develop the mind and whole person and informal learning at work as the mastery of mainly work-related tasks. In that sense the two were seen as complementary, but certainly not as supplementary and interchangeable. This situation is changing now. The distinctions between the two are blurring, for a number of reasons:

- Developments in labour markets and work organisations, and developments in thinking about qualifications are making the polar distinction increasingly obsolete. This is not to say that there are no differences.
- When examining 'education' and 'training' and 'workplace learning' the assumption is that the extremes as well as the borderlines between the concepts are increasingly difficult to identify, and that they often do not make much sense.
- Distinctions between 'education', 'training' and 'workplace learning' are usually derived from the institutions that offer learning opportunities, and not from any

systematic attempt to analyse goals, contents, and learning outcomes.

- Today it increasingly recognised that learning is best understood as contextualised, situational and constructed. In this perspective it is the individual, possibly with the help of mentors, facilitators and teachers, who defines and actively creates the learning encounter. In the perspective of employability, both have their merits, and one is not necessarily superior to the other.
- Policies for lifelong learning go hand in hand with policies for information and communication technology infrastructure. Developments in information technologies can make a difference, because they offer the potential that the individual can be 'liberated' from the institution.
- "Liberation" actually means the "end" of the education monopoly. It is today's equivalent of the "de-schooling" debate that occurred in the early 1970s when the Council of Europe (1978) and OECD launched the concepts of "éducation permanente" and "recurrent education" (OECD, 1973).

Synergies: Some working conclusions

- There is a convergence between education and training.
- Non-formal and informal learning can complement formal adult education.
- But it is also possible that there will increasingly be "displacement". Decrease in formal adult education and an increase in informal learning. This will be particularly the case with the well-educated part of the population. For them the slogan will be "Working while learning" and "Learning while working".
- "Education Business". Decline agriculture, growth industry. Decline primary industry and development of secondary industry and services. What is next? Changes in relative employment shares of different services sectors. Education is expected to grow. Formal education sector alone today accounts for some 5–6 per cent of employment. Real figure is higher and growing. Education may come to account for 10–15 per cent of the labour force. That is how the knowledge society is driving a "learning economy".

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EXPANDING IMPORTANCE OF FORMAL TRAINING

Ms Cândida Soares

Introduction

The changes that the present-day European labour market is experiencing leads to qualitatively higher levels of requirements (academic and professional), the latter implicating the Member States of the European Union in an appropriate response, that is to say, to put into place education, training and employment policies that are apt to responding to the new needs of a production system in full evolution.

Certain specialists in the realm of employment and training, along with certain political figures, increasingly defend the idea that vocational training, whether as part of the formal educational system or as part of an autonomous structure separate from the educational system, could play a decisive role providing that it is located within the perspective of appropriateness of qualifications for the labour market, in the measure where it delivers to individuals the necessary knowledge for the constantly changing process of adapting to the labour market, notably at the level of "knowing how to do," of "knowing how to be" and "knowing how to learn."

It is in this spirit that were created:

- The "White Paper on growth, competitiveness and employment" that emphasized, as one of its priority areas with a view to the development and growth of employment, education/training made up of basic training and on-going training and dispensed to the largest number of persons possible, allowing them thus, thanks to a process of apprenticeship all through their working life, to adapt themselves to changes resulting from technological progress;
- The "White Paper on Teaching and learning. – Towards a learning society" that contains the objectives and the pathways for concrete action designed to give a population the tools to allow it to respond to the challenges of the future (the information society, globalisation and scientific and technical civilization) notably from the point of view of its capacity to adapt itself to new situations and of its capacity for initiative.
- The "European strategy for employment" following the Luxembourg Summit, with as last aim to assure economic growth associated with a higher level of job creation, in fixing the quantitative objectives at a European level in the matter of insertion of young people and of unemployed adults, of training of unemployed workers in following guidelines of activation of employment policies.

The role of the European Social Fund

The intervention of the ESF in all the Member States, from the very beginnings of the original Community and now with the European Union, has always had an auxiliary character in rapport with formal vocational training. That is why, it was present generally as limited training sessions serving primarily to update, recycle, perfect, or reconvert skills and qualifications acquired previously in initial training systems.

We know that the results varied among the Member States, not only, and probably, because of the different quality and quantity of these limited training sessions, but also, and perhaps essentially, because in a certain manner they remained "grafted" to the vocational training systems that strongly differ markedly in quality and in quantity (from the point of view of their training capacity). Therefore, and at the limit: in a system of initial formal vocational training that functioned well, all growth in limited formation produced visible and significant results; on the contrary, in a system of initial formal vocational training that presented organizational and functional deficiencies, even high-quality limited training ran the risk of producing practically invisible and insignificant results.

It is equally for this reason that in certain Member States, for example Portugal, we attempted to make the ESF support systematic training, that is to say, formal vocational training, such as for example the apprenticeship system and vocational schools, in addition to certain limited training programmes. Thus, in the light of the importance that one now attributes to formal vocational training, one can say without false modesty that Portugal as well as the other southern Member States were correct in their presumptions.

Labour market complexity and formal vocational training

Indeed, the growing importance of formal vocational training, and consequent to initial training, now goes together with the appreciation that it is only through such training that it can find its basis, and take root in, later limited training – continuing education, in the enterprise, recurring, permanent, all through the working life – that have become necessary during certain moments and successively, following technological and organizational changes that affect employment, professions, enterprises, societies. More than that, the complexity of these changes often implies that even these limited training sessions themselves are forced to configure and to develop with a degree of systematisation and formality that can not really be concretised, with what chance of success, only if the learners possess previous training experience comporting characteristics of this type.

Yet again, it is the impossibility itself of predicting the profiles of jobs and even the professions of the future, the near future and over more so the distant future that makes the investment in formal vocational training make sense – as much financially, for training programmes, as personally for the learners – on condition of course that these include a technological dimension covering a wide range as well as a socio-cultural dimension integrating it. This integrating dimension is crucial, above all at this moment in which we live, where uncertainty predominates, both for the length of time separating the end of the preparation and the exercise of one or more professions and the beginning or the renewal of this exercise, but equally as regards the professional realm(s) and the sector(s) of activity where this preparation will be in fact used.

Thus it proves to be fundamental that vocational training results from the complementarities between a solid general training that one presumes is acquired in the first nine or eleven years of education and a more specific training oriented towards a certain profession field. We estimate, however, that the role that training should play cannot be limited to its passive aspect of giving access and knowledge oriented toward narrow and pre-existing professional profiles. It should also serve to create new profiles in the production system that, in the matter of knowledge and organization of work, join with changes flowing from the process of restructuring and reconverting of production, which hereinafter will impregnate, inevitably and permanently, the entrepreneurial reality.

All the same, it proves to be indispensable to not make the affirmation that the growing importance accorded to formal vocational training is synonymous with "going back to school," in the strict sense or more broadly (a "vocational training centre" is equally, in this last assertion, a sort of "school") or, otherwise stated, an indefinite, and intermittent, lengthening of the "warehousing" of the young, and of adults, in the ghetto of "the context of pure training." Certainly not! The "formal" should be comprised in a positive fashion, as a systemization, an intention, an importance, a pertinence of the apprenticeships, of the contents as well as the process, that which presupposes exactly for this same motive, the multiplication and the diversification of the forms of work-linked training – which should not be limited to the "work contexts" only in enterprises – and must have an organization and functioning that is at the same time flexible and complex.

The same affirmation of growing importance accorded to formal vocational training must not signify either that from now on one denies the importance of informal vocational training, that which flows from the exercise of a profession, when it mobilizes tacit knowledge, often favourable to new apprenticeships, even if they are rarely recognized as such.

However, therein lies another problem. The healthy attitude, when it is a question of recognizing the importance of formal vocational training, is that it brings to the surface the insufficiencies of limited training. That is to say, during a certain period and in certain Member States, the idea that one could live with repeated failed schooling has gained ground in a perverse way, even if this implies that a certain number of young people abandon their vocational training early, because these last will eventually have the chance for recurring limited training that will be charged with solving, later obviously, their problems of professional qualification, or at least the acquisition of minimum skills to allow them to earn their living. Today, it seems that one has begun to think that this idea is completely intolerable and that nothing can substitute for a solid formal vocational training.

It is obvious that one runs risks: if it is confirmed that jobs do not exist for everyone, or at least that there are no jobs that imply a level of job performance requirements in rapport with the level of qualification obtained thanks to formal vocational training, then the social conflict that will stem from this will be qualitatively very different – it is one thing to say to those who seek employment that they cannot succeed because they have an insufficient training and another thing to say that they cannot succeed because, purely and simply, available jobs do not exist for their excessively high level of qualifications.

Taking into account the implementation of the current "European strategy for employment," in the aftermath of the Luxembourg Summit, that which came to reinforce pathways in rapport with new areas that are creating jobs, as well as those in rapport with new forms of labour (self-employment, work at home) in a logic of co-ordination of macro-economic and structural policies with employment policy, it is possible to hope that the rise in qualification levels resulting from the large growth accorded to formal vocational training will allow us to see the emergence of modes of creativity impossible to imagine today, but that will also allow the resorption of deficits in the matter of personally gratifying and socially useful jobs. This positive attitude is based on the fact that this same European strategy is translated by positive results, which are found in most of the labour market indicators, notably in the matter of unemployment among young people, and in the majority of the Member States of the European Union.

In this context, hardly any doubt remains about the fact that it is worth the trouble to invest in formal vocational training (on condition that one does not mean by that, exactly the opposite, the "return to school" to which we have made allusion), training that should continue to co-exist with limited training (just as indispensable in many circumstances). And this because, within the current framework of globalisation, of technical progress and of new forms of work organization, new qualifications become indispensable – in a time when enterprises are trying hard to follow market evolution and to encourage mobility of their personnel, workers are called upon to adapt more and more quickly in order to acquire multiple skills, notably in the areas of information and communication. The capacity to manage in an autonomous fashion the sense of human relations, the aptitude to communicate, to analyse and to solve problems and the capacity to learn are the main challenges that favour innovation, creativity, strategic logic, management of change and company spirit in the new economy that is being designed.

It is in order to face this complex reality that we defend our system of vocational training that assures a general training that allows the individual to develop his capacities and his potentials and prepares him for the later training paths (formal or informal), with a specialized character.

One recognizes, thus, that training occupies a prime place in employment policy, a good system of training and education determines the level of competence of

workers of a country, a decisive factor for the development of our society.
Thus, it becomes necessary to increase the effectiveness of training activities by assuring that they are within the framework of the following principles:

- universal acquisition of qualifications (precondition for the implantation of a culture of training),
- taking completely into consideration the qualifications of workers at the moment of hiring,
- system for recognizing skills versus the quality of the training,
- system for evaluation of the actual results of the training in such a way as to give this last new characteristics adapted and adaptable to respective production systems and allowing the anticipation of their own needs,
- existence of partnerships in the matter of training, which constitutes a means of clarifying, in a certain measure, the respective roles of government, employers and workers.

Partnerships and formal vocational training

Despite the fact that at the present time, the State plays an increasingly auxiliary role in the domain of vocational training, and that it therefore exercises less of a role of direct provider of training, it participates, nevertheless, more and more with the social partners in the conception and practical application of the policy in a long-term perspective.

The State plays a significant role, however, in an isolated fashion within partnerships, in the following tasks: i) furnishing information about the needs for qualification; ii) control of the implementation of training activities; iii) guarantee of the carrying out of formation actions destined for certain populations, notably, personnel training in SMEs, training and perfecting of workers coming from the most disadvantaged groups, workers affected by restructuring, training in favour of self-employment and the consolidation of the corresponding initiatives; iv) financing of the training; v) development of or participation in systems for the validation of the quality of the training (systems to regulate the quality of training and of certification of skills).

As far as the last task that we have cited is concerned, one of the major objectives for which the State is responsible is to establish trust among all the actors involved in the training market: young people should be able to be certain that the training that is offered to them corresponds at least to quality norms established by public authorities; employers should be able to trust in the value of training certificates, that which equally constitutes an essential condition for proper functioning of the initial employment market; establishments within the system of education/training should be able to be certain that a diploma corresponds to specific skills.

To affirm that this intervention should have an institutional character does not mean to affirm that it must be the responsibility of the State, much to the contrary. It is not only public institutions by also the social partners who take part in the negotiation of accords applied to the ensemble who should be the actors of the guarantee of quality of the certification. Moreover, the form taken on by the regulation of the above-mentioned interventions depends in large part on a system of institutionalised vocational training and on a specific national context (in the case of the initial training in Germany where the dual system depends on the enterprise, the social partners play a decisive role; in France where the predominant system of initial training depends on the school, it is the Ministry of Education who establishes quality criteria; the United Kingdom is an example of a training system that is essentially regulated by the market, the State recognizing criteria for national qualification elaborated in large part by employers in order to improve transparency of the offer on the training market).

In Portugal, the regulation of training quality is done along these lines:

● a system of accreditation of training organisms, created by ministerial ruling, with for objective to contribute to the structuring of a system of vocational training, to the professionalisation of the actors and to the reinforcement of the quality, the utility, the appropriateness and the effectiveness of the training interventions. At the same time, this system must contribute to increasing the "profitability" of the application and of the use of public funds destined to support vocational training. The accreditation system is not a system based on "conformity to the norm." "Accreditation essentially constitutes an operation of overall technical validation of the training capacity of a given organism. It is therefore a precondition, which increases the probability of implementation of quality interventions in the area of training."

● a system of certification of skills whose objective consists in elaborating the common norms of certification and in determining the activity sectors or the professional areas for which it would be convenient to establish specific certification criteria; this system rests on a tripartite structure that functions with the Minister of Labour.

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APPENDIX 1

OBJECTIVES AT THE EUROPEAN LEVEL	OBJECTIVES AT THE NATIONAL LEVEL
FIND ANSWERS FOR ALL YOUNG PEOPLE BEFORE THEY HAVE BEEN UNEMPLOYED FOR 6 MONTHS	TO BE ATTAINED IN 3 YEARS ■ 10% annual increase in initial training ■ Double the number of apprentuces in 5 years ■ Reinforce the programme of stages (13 thosand in 1998)
FIND ANSWERS FOR UNEMPLOYED ADULTS BEFORE THEY HAVE BEEN UNEMPLOYED FOR 12 MONTHS	TO BE ATTAINED IN 3 YEARS ■ Increase in training destined for the unemployed by 25%/year
TRAINING FOR THE UNEMPLOYED, IN ORDER TO REACH A MINIMUM OF 20% OF THE UNEMPLOYED BEFORE THE END OF THE PLAN	-25%/ year increase in training destined for the unemployed, in order to reach 20% of the unemployed by the end of the plan -Attain a level of 10% of the working population in training by the end of the plan

APPENDIX 2

QUANTIFIED OBJECTIVES OF THE NEP

	REFERENCE VALUE 1997	PROJECTED VARIATION	ACTUAL VARIATION 1998 (ESTIMATION)
TRAINING DESTINED FOR THE UNEMPLOYED	21,500	+25%	+27.4%
YOUNG PEOPLE IN TRAINING	110,000	+10%	+6.4%
APPRENTICESHIP SYSTEM	13,000	+20%	+27.7%
PROFESSIONAL STAGES	6,000	+116%	+133%

ENHANCING THE PARTNERSHIP BETWEEN VOCATIONAL TRAINING AND THE ECONOMY AT LARGE - THE INITIATIVES AND EXPERIENCES OF THE EUROPEAN VOCATIONAL TRAINING FOUNDATION

Mr Bernhard Buck

The European Vocational Training Foundation

The European Vocational Training Foundation is an Agency of the European Union and currently employs a staff of 130 members. The Foundation was set up to provide backup support and to co-ordinate EU-financed activities in the partnership countries of Central and Eastern Europe, the new independent states of the former Soviet Union and Mongolia. The Foundation has also been conducting such activities for those Mediterranean countries, which are not EU member states. We are currently collaborating with 38 partnership countries, carry through projects and also provide backup support for them in other respects to reform their vocational training systems. Our perspective is to work as a "centre of expertise", i.e. to provide backup support for the partnership countries, so that they develop their own capabilities and unfold their own expertise. We place emphasis in this respect, on self-generated development in each country and view our own role in this process as a sort of "transfer agency".

Introduction

As the examples to be given by myself refer essentially to the countries of the Central and Eastern European Areas, I would like to limit my introductory remarks to these particular countries.

The reform of vocational training in Central and Eastern Europe embraces two fundamental aspects:

- The comprehensive but also unique kind of reform, which results from the social and economic transformation process (in the sense of democratisation and market economy orientation). This refers to all areas and sectors of the educational and vocational training systems and is proceeding with extraordinary speed.
- The innovative and ongoing kind of reform, which seeks to provide answers to the rapid and globally oriented economic and technical change, which all industrial societies will have to experience and co-ordinate.

Vocational training reform, resulting from the transformation process and which embraces the entire system, has already made great strides forward in all countries. The differences between the individual countries arises in essence, from the differentiated start-up conditions at the beginning of the Nineties. Critical remarks, however have to be directed at the fact, that such reforms have oriented themselves on ideas of vocational training of a rather more Western nature.

The discussion of the second reform aspect is only just now commencing, and is rather hesitant in getting off to a start. This is, of course not very surprising, when one takes the ramifications of economic change in the industrial countries into account – a wave of change, which has only just partially arrived in the countries of Central and Eastern Europe, but which is continuing irrevocably to embrace them.

The constraint of continuous innovation

In all the industrial countries, rapid economic and technical developments have led to enormous changes in manufacturing, production and the provision of services. The labour markets in the various national economies is currently in a state of deep rooted organisational break-up and reformation. A new phenomenon in comparison with previous historical economic changes, is the speed of the advancement, and the impingement of such multi-layered influence, with which all areas of society are being affected. The essential triggering causes are well known – the globalisation of the markets for the means of production, capital and the development of information and communication technologies. Resultant and increased competition in practically all areas of economic activity have, among other things, three intrinsic effects:

The markets : the market situation between providers and consumers has fundamentally altered in the direction of customer- and service-provision-orientation. In the meantime, there is scarcely any area of business activity, where it is not mandatory to work in a service-oriented manner.

Occupational activities : the times of full employment have gone. Even the times of continuous employment have gone and those of on-going occupational activity have come to an end. The working life of the individual is increasingly being characterised by the termination of one job and the commencement of a new occupational activity; whether such be work in a new occupation, self-employment, or time periods of unemployment and many other additional features.

The labour market: the traditional form of job is disappearing more and more. The causes lie in the new and continuously changing organisation of commercial enterprises as well as the networking of manufacturing, production and services relationships. Positions and functions with long-term defined job descriptions and unequivocal task demarcations have shown themselves to be of increasing hindrance. Such are being replaced by tasks of comprehensive character with a flexible amalgamation of activities, which demand the prerequisite of multi-level qualifications.

With regard to vocational training, this implies:

The service provision function of vocational training: such will have to become organised along service-provision oriented lines – i.e. inwardly – meaning with a view to the trainee – as well as externally – with a view to those creating and making new jobs available.

The integration of entrepreneurship: this can no longer be limited to the furtherance of employee qualifications – what is rather more in demand, is the opening-up of alternatives, which will further individual initiative and entrepreneurial ventures.

Training partnerships and the formation of networks : the goals for providing a concrete labour situation – with reference to the capability of the trainee to act commercially - is no (longer) only capable of being achieved by means of the curricula and methodical courses offered by school-like institutions and advanced training establishments. What is necessarily required is the build-up of training partnerships and networks between educational institutions and establishments of labour organisation on a regional basis, which are able to combine, the realisation of vocational training and occupational employment at a high level.

In the cases of the partnership countries, this means, that they will have to reconsider their previously introduced vocational training reforms in their constituent parts, under the transformation process and actively to address the previously sketched-out market challenges and their influences on vocational training activities.

The Foundation seeks to provide backup support in this respect by means of carrying out studies, holding conferences and organising projects. I would now briefly like to go into detail on three forms of individual initiative.

The integration of occupational activity and training

THE BACKGROUND

Occupationally-oriented training in the countries of Central and Eastern Europe, is still charged with the "mortgage" of the historical past. Through the time period of the dominance of actually existent institutions under "socialism", a particular version of labour-integrated training was introduced – an apparently dual system, where the training institutions were part of the state enterprise involved. The training institution fulfilled no training mandate and represented no counter balance to the tailor-made organisation of labour in the state enterprises. The sole purpose of such training establishments was the training of workers specifically with the goal of being able to integrate trainees seamlessly in the workforce organisational concept of the state enterprise in question.

At the same time, the previous practice tended to discredit the idea of occupational activity and training, since the state enterprises used this training approach exclusively to communicate skills with the limited bounds of closely knit artisan-trade activity. The fact that, notwithstanding, occupational activity experience was acquired and training courses took place, had another reason. The constant lack of manufacturing and production components and spare parts for repairs, as well as the relatively low technological development level, forced workers to develop "ad hoc" solutions for specific manufacturing and production problems.

With the demise of the large state enterprises, such training institutions also disappeared. In the meantime, practically pure school-type oriented vocational training systems have grown up in the countries of Central and Eastern Europe, which have difficulty in opening–up and directing their activities to market requirements. At the same time, the enterprises currently operating on the market also have difficulty in the organisation of internal corporate training and advanced training systems.

THE PROJECT FOR THE "INTEGRATION OF OCCUPATIONAL ACTIVITY AND TRAINING"

The Foundation has been addressing this subject matter since 1997. A three-year cross-border project for this purpose has been running since 1998 in the countries of Hungary and Slovenia.

The general aim of the project is, on the one hand to seek out training institutions, which are convinced of the necessity of building-up occupationally-oriented training systems and, secondly to include enterprises into a scheme, which have accepted the requirement of furthering training within their own workforce organisations. The project team intervenes in the internal discussion projects and takes on the role of compere and coach. Its assignment consists of providing continuous backup support for the participants in the project, in order that they may exploit their own capabilities, experience and potential, so as to be able to structure the training measures adopted and to implement such into a meaningful training concept.

A total of eight training establishments and commercial enterprises are participating in the project. Although these are all extremely differentiated as regards their particular organisations and methods of addressing training in general, they are all, more or less, occupied with the following core problems:

- the identification of new qualification requirements;
- the identification of training and advanced training requirements;
- the improvement of training courses and processes;
- the assessment and recognition of the results of training and advanced training.

As all the measures taken under the project provide backup support for current initiatives in training institutions and commercial enterprises, the achieved results essentially consist of documenting such initiatives and the making available of such to a larger public audience. The publication of good practice-oriented examples, will tend to promote discussion on the integration of occupational activity and training. Of equally ranking significance for the project, is the analysis of existing hindrances and difficulties in the implementation of such a approach.

The analysis of successful and less successful cases should in the last resort, flow into political recommendations for a national vocational training policy. An important result of such will be the making of proposals for the certification of non-formal training – a problem, which is currently being intensively discussed within all the EU member states.

The Foundation lays great emphasis upon the national and international dissemination of the results of the project. All the written documentation elaborated under the project can be accessed (in the English language) via the internet by visiting the website of the Foundation, and it is also available on the websites in Hungary and Slovenia (in the relative national languages of those countries). The Foundation also broadcasts the results at conferences of third party organisations; it also organises national conferences for its own part, to which representatives from the political scene, the economy at large and training schemes, are invited. At the international level, a "brainstorming" meeting will be organised in May of the coming year with representatives from the countries of Croatia, Bosnia-Herzegovina and Macedonia, in order to find out to what extent it would be meaningful to set up such a project in this region of south-eastern Europe. Finally, an international termination conference is to be held in Romania at the end of next year extending over into the next year but one, with representatives of all the Central and Eastern European countries as well as with representatives of some of the Western countries.

The training and advanced training of instructors and educational training teaching staff

BACKGROUND

The effects on vocational training of a drastically changing market economy, already referred to above, also demand new requirements of the vocational training establishment instructors and the educational training staff under vocational training schemes. Their tasks have become more complex and impressed with the requirement for greater individual pedagogic effort. An increasing personal awareness of responsibility is being demanded of them as well as an enhanced degree of communication and curriculum-creation capability.

The responsible creation of the curricula for their professional activities is thus increasingly becoming a function of self awareness for their responsibilities and pedagogic position, i.e. the ways and means, by which training instructors can perceive the importance of their own role in the process and of how they address and implement such responsibility. The overall situation is further complicated by the fact, that the restructuring and reforming efforts fail to correspond with the increased personal requirements of curriculum content, as, there is no motivational and economic incentive for training instructors and educational training staff, nor any structural backup measures, in order for them to be able to participate in the overall social changes in an appropriate manner. On the contrary, their social and occupational status is being eroded by insufficient budget funding for the vocational training sector as well as by low wages, which often do not correspond with qualifications provided, and in any event not with the political mandate for the provision of vocational training schemes.

In the meantime however, the necessity is being recognised at the political level to an increasing extent, that the status and profile of training instructors and educational staff in vocational training, should be improved. This has, however to date failed to lead to any concrete effects to improve the financial, social and organisational scope of the profession.

THE PROJECT FOR THE "NEW ORIENTATION FOR TRAINING AND ADVANCED TRAINING OF INSTRUCTORS AND EDUCATIONAL TRAINING STAFF IN THE VOCATIONAL TRAINING SECTOR"

The three year cross-border Project commenced officially in the countries of Latvia and Lithuania in the October of 1999. It is being financed on a parallel basis by the Governments of Denmark and Finland as well as by the European Foundation for Vocational Training.

Empirical analyses have shown, that training and advanced training in the form of schooling – but also the training and advanced training of instructors and educational staff – still continue to be characterised by a training organisation, which is deaf to the requirements of the regional labour market. Training has been reduced to routine tasks and dominated by a style of instruction and training, which is characterised by frontal pedagogic activity. The training instructor practically controls the entire training course, which presupposes a high level of discipline. Even the internal organisational framework conditions of training schools and other vocational training institutions fail, in every manner in their adjustment to meet the necessary qualitative changes.

The approach of the project is based on the idea, that, in the first instance, the training instructors and educational training staff in vocational training and advanced vocational training schemes are the implementers of change in vocational training, and that it is insufficient, on the other hand to acquaint training instructors and educational training staff just with new curricula content and pedagogic methods. What is really needed is, that the regional labour markets are also to be taken into consideration as a training component. For this purpose, the participants have agreed on five points of emphasis:

- the opening-up of the vocational training institution for the requirements of the labour market;
- organisational development within the training establishments;
- the advanced training of personnel to training instructors and educational training staff;
- the introduction of new instruction and training methods;
- the build-up of national networks for training instructors and educational training staff and training establishments, and the joining-up with an appropriate CEDEFOP network (TTnet)

Entrepreneurship in the vocational training sector

BACKGROUND

Entrepreneurship is more than just another subject of many. In essence, the matter can be categorised in the context of a re-orientation of vocational training as such. The furtherance of entrepreneurial self-employment through training is something quite different from that, which we usually understand as vocational training. Entrepreneurship is primarily concentrated on the individual capability to act commercially and less on functional competencies. Access to training is more oriented towards experimental activity and less routine. The aim is not the communication of assured knowledge, but is rather more concentrated upon the development of the capability of learning to assess economic situations, to elaborate creative problem solutions and to implement these.

The question of occupational opportunities brings entrepreneurship training more and into the focus of vocational training reform. Traditionally, the curricula of vocational training schemes have been directed towards the needs of larger and well-established enterprises. Such a requirement has in the past been the driving force behind a modernisation of qualification processes. Although such enterprises play a large role for the national economy, their importance in this respect, as regards employment, appears to be continuously on the wane. On the other hand, the significance of the small and medium sized enterprises is on the rise. An example from the United States will illustrate this:

"Since 1980, 500 of the largest American groups have outsourced five million jobs. On the other hand, companies, corporate promoters and service providing enterprises have created 34 million new jobs during the same period of time – particularly in recent years, and mostly for over average wages.

Every hour in the United States, 100 new firms are being incorporated, which offer occupational employment – and over 900,000 during the past year, not including the self employed advisors and other individual market participants. Every twelfth person is currently seeking to get his or her own business "off the ground". In Germany, this ratio figure is merely one in 45" (citation from "Der Spiegel", the current and political affairs weekly, No. 43/1999, page 148).

Entrepreneurship training seems to generate the sort of capability to act successfully on a commercial basis - something which is indeed needed in the majority of firms, in which beginners take on their first jobs – namely prosperous small and medium sized enterprises.

A further fact speaks for the growing key position of entrepreneurial training, which has dominated the discussions on reforms for a number of years in the vocational training sector. With reference to altered organisational structures, large enterprises demand entrepreneurial orientation as an average requirement from their workforce members. The terms used are "intra-preneurship" and "Mitunternehmertum" (co-entrepreneurial activity status) required of workforce members. Progressive pedagogic concepts, with their key terms such as the "development of self awareness", "problem solution capability" and "socially responsible behavioural actions" can be associated with this approach.

THE ACTIVITIES OF THE FOUNDATION

The Foundation is currently examining the significance of entrepreneurship training in the "Tacis" countries. It is thus obvious, that such countries, which have to combat rates of juvenile unemployment up to 30%, have recognised their opportunity for furthering the self-employed occupation of young people. On the basis of studies carried out on such countries, the Foundation produced a report on the concept of a possible project. The Foundation is to organise an international "workshop" at the beginning of next year on this subject. It is no coincidence, that the Advisory Forum of the Foundation is to discuss this matter as a major item on the agenda during its next meeting.

Our current activities make something quite clear – the fundamental challenge, which entrepreneurship training presents to vocational training is one of a system-like nature. Vocational training will, in the future have to be in a position to qualify trainees in such a way, that they will be able to choose between an employment job and a self-employed activity.

ON-THE-JOB LEARNING IN THE TRANSITION FROM TRAINING TO EMPLOYMENT - THE FRENCH EXPERIENCE ABOUT ALTERNANCE

Mr José Rose

Introduction

Over the last several years, we have witnessed a generalisation of work-linked training ('altarnance') that now occupies a central place in all of the countries in the European Community. Without doubt, this is the result of a forceful and historical incitation of international organisations as attested, for example, by the OCDE report on insertion of the young into working life in 1977 or the EEC communication of the European Council in 1979. But it is also the result of a transformation if the forms of work and of an interrogation about the conditions for acquisition and use of skills.

Alternance, because it is at the intersection of training and employment, because it brings together the school and the enterprise, calls into question numerous things that fall as much within the conditions for acquisition of qualifications as for the modalities of functioning of the labour market.

Alternance, by the multiplicity of its dimensions, is therefore interwoven in considerations at the same time pedagogical (the process for acquiring knowledge, the links between theory and practice, the liaison between work and instruction, the pedagogy of the concrete), psychological (motivation, the actual situation) and economic (the effective liaison between school and enterprise).

Here, we shall examine this from the socio-economic angle. After having presented the broad outlines of the evolution of alternance training systems in France, we shall examine the respective roles of the actors involved and analyse the dual role of contribution to professional socialisation and to the regulation of the labour market.[1]

Evolution of alternance training in France

A LONG HISTORY

France has a long tradition of alternance, primarily as the responsibility of the school system, but having developed as well a specific system of apprenticeship, in parallel. This is unique, as compared with other countries such as Germany or several Northern countries that have a alternance training system based more on contracts with the enterprises via the dual system.

Alternance vocational training is therefore nothing new for France. It was already under discussion in the 19th century when trade unions and employers confronted each other over the modalities for training workers. And it concerns, in certain cases for a very long time, a multiplicity of sectors: teaching, medicine, engineering schools, social workers schools, technical training, apprenticeship.

This history has always been subject to crises and reforms and has not allowed the development of alternance in all sectors of activity. Thus, apprenticeship, still the model of reference in debates about alternance, could not develop outside of very specific sectors, essentially within trades, neither before nor after the Astier Law of 1919.

PROGRESSION AND RECENT DIVERSIFICATION

Over the past decades, numerous measures have been undertaken to develop work-based vocational training. In referring to the work of A. Monaco[2] , one can distinguish the following stages.

Between 1959 and 1972, alternance develops first within the school but it is also accompanied by a certain resurgence of the idea of enterprise as training ground.

In a context of raising the school-leaving age, of raising training levels, the trend towards brief technical instruction and the relative democratisation of the education system, alternance begins to develop in new fields related to academic failure. Thus the Berthoin reform of 1959 poses the principle of extension of alternance and envisions the creation of new formulas integrated into obligatory schooling and susceptible to assure the lengthening of schooling. Thus, sections for vocational training are put in place in 1967 that seem to be the first stage in vocationally oriented education, such as "the first attempt at an organic liaison between the school and production." Similarly, alternance is provided for in special education sections created in 1965, in pre-professional level classes created in 1972 and in apprenticeship preparation classes in 1972.

At the same time, this period experiences a new apprenticeship crisis, marked by the decrease in the number of apprentices. This leads to the inter-professional agreement of July 1970 that recognises the status of young worker for the apprentice and establishes a longer training period in specialised centres (the CFA) and a stricter control of the apprenticeship.

Between 1972 and 1981, new developments in alternance occurred by means of operations of insertion and also in brief technical education. Thereafter young people at the CAP-BEP level are targeted and no longer only students whose course work does not lead to a diploma. These initiatives favour the progression of alternance, as much from a quantitative point of view as in word and deed.

Thus, in 1972 pilot experiments in alternance for young people leaving school without a diploma are set up in the school system. Above all else, experiments are developed that are more oriented towards insertion of young people without qualifications: the 1975 Granet stages, still called "Operation 50,000 Youths," work-training contracts in 1975. Starting in 1977, date of the first national employment pact, these measures are structured within the ensemble of programmes for help with insertion: work-training contracts, practical stages in enterprises, educational stag-

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es in enterprises. But for all that, it does not give rise to a precise control of the content of alternance and is often the object of sharp criticism, notably with regard to practical stages whose training content is judged particularly insufficient. It will be necessary to await the 1980 law on alternance before the position of young people in alternance is clarified, whether they are in school or on salary.

In addition, the regular recrudescence of classical apprenticeship continues with, notably, a 1977 law within the framework of the first national pact for employment of the young. It will not manage however to solve the old difficulties of apprenticeship: involvement of only a small number of activity sectors, difficulties in finding apprentice masters, excess work for the enterprises, risk of insecurity, shortcomings in the training given, bad image.

The years between 1981 and 1989 are marked by a consolidation of alternance inside and outside of the school.

In 1982, the establishment of a programme of professional and social insertion for young people from 16 to 18 years of age is an original way to respond to previous criticisms. It gives an important place to alternance through stages of insertion for young people in the most difficulty (five to ten months, with half in enterprises) and qualification stages (six months to two years, with a third in enterprises). It emphasises the importance of tutors (a personnel training plan is included) and follow-up of training.

In 1983, an important inter-professional accord is signed. It leads, in 1984, to a law addressing vocational training that institutes, among other things, a programme for alternance: stages for initiation into professional life, qualification contracts and adaptation contracts, stages in alternance.

During the years 1984–1989, reinforcement of control of alternance by enterprises increases with the development of tax exemptions for bringing in trainees and a new apprenticeship reform in 1987. But, at the same time, certain measures are taken in the school, such as in 1985, for example, cycles of professional insertion through alternance (the CIPPA) or twinning between schools and enterprises.

The movement to develop and diversify alternance continues during the 1990s and leads to a veritable institutionalisation of alternance.

New measures are put into place, such as educational sequences in enterprises, stages for access to the enterprise, stages for reinsertion into alternance for long-term unemployed. And with the five-year work law of 1993, employment and vocational training imposes a decentralisation of vocational training to the regions along with a subsidy and a tax credit for hiring young people in alternance.

This movement towards extension thus continues up to recent years and makes alternance a very important programme in France. As an example, we observe that the number of individuals concerned by all kinds of apprenticeship has progressed between 1992 and 1996 by more than 50%. And we had also witnessed the diffusion of apprenticeship to every level of training: professional baccalaureates, BTS (one out of ten goes into apprenticeship), IUT and even universities and engineering schools.

HIGHLY VARIED PROGRAMMES FOR ALTERNANCE

A wide variety of programmes relating more or less closely to alternance now exist.

Considering the measures destined for young people having insertion difficulties, we can list the following possibilities:

- the qualification contract is destined for young people from 16 to 25 years of age who do not have a level V qualification (CAP-BEP) or having a qualification that has not allowed them to find employment; this is a contract from 6 months to two years with designation of a tutor in an enterprise and tax exemption for the employer;
- the stage for access to employment should allow the development of employment by training within the enterprise;
- the employment solidarity contract combines twenty hours of work and periods of training; it is reserved for the public, para-public and association sectors;
- the employment initiative contract is aimed at long-term unemployed or young people;
- the orientation contract is open to young people for 3 to 6 months and includes 32 hours of training per month and tax exemptions for the employer;
- the apprenticeship contract is open to young people between 16 and 21 years of age.

The number of people concerned by these various measures is large, to the point where alternance now constitutes a major portion of vocational training for the young. Thus, in 1997, according to numbers prepared by the Ministry of Employment (the D.A.R.E.S.), the following number of people were involved:

· 215,000 work initiative contracts

· 203,000 apprenticeship contracts

· 100,000 qualification contracts

· 500,000 employment solidarity contracts

· 185,000 insertion and training for employment stages

· 55,000 adaptation contracts

· 35,000 access to employment stages

But over and above the quantitative scale of these programmes, a large diversity in situations is seen. There are some 750,000 older people in France concerned, and some 700,000 unemployed of less than 25 years of age.

There is therefore no doubt that alternance differs according to the length and the rhythm of the training, according to the advantages that it generates for enter-

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prises, according to the populations concerned, and overall, according to the respective roles that are played by the school and the enterprise.

Depending on the situation, we are therefore in the presence of a genuine alternance that closely melds equal work and training periods, or in a situation of approximate or false alternance (this is the grievance lodged against practical stages in enterprises). Depending on the case, one is in simultaneous or consecutive alternance (depending upon whether the training time and the work time superpose or succeed each other), in a juxtaposed, associative or integrative alternance.

These distinctions, sometimes obvious in the definition of the measures themselves but often made in light of their actual application, are completed by two further distinctions. Depending upon the case, we can consider in fact that alternance is more a singular pedagogical programme or more a new management practice for its workforce by enterprises. Depending upon the case, in particular, depending upon whether the person concerned has scholastic status or salaried employee status, it falls more under training or more under employment.

Only a precise evaluation of these programmes permits knowing in which situation one finds oneself. These evaluations have been numerous during the last several years, whether it is a matter, for example, of work by the ANPE, the Céreq, or by research teams. They have raised numerous methodological problems. The evaluation is in fact a dangerous exercise whose results obviously depend on the referents retained. One can limit oneself to a simple examination of the effective implementation of the policy: accounting balance sheet (people concerned and sums spent), analysis of populations reached (school profile of young people and characteristics of the enterprises concerned). One can also do a management-oriented balance sheet (decisional rules and their effective application, selection processes), political (conformity of the results with the announced objectives), economic (efficiency of the measure) or sociological (satisfactions of those involved). In every case, it is a question of examining the effect of these measures with regards to a referent that could be the previous situation, the targeted situation or that existing elsewhere.

Concerning alternance, the question of effects is not obvious. One can judge the efficiency of these programmes with regard to the training (what new knowledge has been acquired, has this new knowledge been of any benefit to the people who would not have acquired it otherwise?) or of employment (have the beneficiaries been hired by the enterprise giving the stage or are they on a favourable professional track?), in the short run (did the trainee finish the training and is he hired?) or in the long run (is he permanently protected from unemployment?).

Despite these difficulties, studies and evaluation work are sufficient to give an idea of the role, or more precisely roles, that alternance programmes fill.

Analysis of the roles of alternance

According to A. Monaco one can distinguish two approaches. The first analyses alternance in terms of training-employment appropriateness. It starts from a criticism of the school and of its inaptness for concrete workplace conditions and proposes alternance as the solution, because it gives priority to practice. Consequently, one has only to search out the good connection between scholastic logic with regards to productive logic and there one will find modes of efficient negotiation between firms and training establishments. This conception is qualified by the author as normative in the sense that it does not question production logic and poses as self-evident the existence of the need for qualifications within enterprises that can be satisfied by training.

The second approach considers alternance with regard to conditions of access and holding a job. It emphasises the fact that alternance concerns only a certain type of training, a certain type of enterprise and contributes to improve the circulation of young people and their use by enterprises. It then appears to be a new way to prepare young people and to put them to work. It is thus a form of professional mobility for young people, combining preparation and usage of the workforce.

THE DYNAMIC OF THE ACTORS

Alternance is first of all the result of a complex interplay among actors, since it involves enterprises, training institutions and individuals. This multiplicity and this scattering of actors are at the origin both of the development of alternance and of its difficulties.

Enterprises are therefore more and otherwise implicated in alternance programmes to the point where one can speak of a certain "rehabilitation" of on-the-job training and qualifications acquired on the job. But all enterprises are not concerned. On the contrary, there has been a polarisation in very specific activity sectors such as building construction and public works, retail sales, retail services, hotels, restaurants, car sales and repairs. These sectors, which are often the prime sectors for recruitment of young people, often offer insecure employment conditions and are made up of small-sized enterprises.

More than that, the enterprises use the alternance programmes in an extremely different fashion. This is clear for apprenticeship but also for measures taken for young people. Thus, alternance is sometimes used as a true training device and sometimes as a simple alternative to employment.

For their part, training organisations do not seem to play an essential role in the organisation and development of the alternance and one can speak without doubt of an asymmetry of relations between training organisations and the enterprises offering stages. This finds its source in the problem of finding stages and in the conviction that the essential takes place in the enterprise. Inversely, the periods of recovering of practical knowledge acquired during training periods are not always very well developed.

As for the persons themselves, their motivations are extremely variable. Certain see in the alternance programmes a means of getting around academic constraints and of obtaining a qualification through a more practical path. Others use these programmes as forms of employment. Others are simply subjected to these measures.

During recent years, the development of alternance formulas has certainly contributed to changing the rapport among these diverse actors. One can also say that we have witnessed a reconstruction of the rapport between school and enterprise. Reconstruction and not creation, because, contrary to what is generally put forth, there has never been a break between training and production in France, only a change in the way that the two actors interface and a more important historical role for the school.

Finally, it must be pointed out that the involvement of all the actors is certainly one of the conditions for success of alternance. If the agreement in principle seems from now on to emphasise the interest of alternance as a mode of acquiring knowledge (the negative a priori with many trainers at the beginning of the 1970s no longer exists, except marginally), the implementation does not always proceed automatically. Indeed it requires the involvement of trainers in the follow-up of periods in enterprises and in the restitution of acquired practical knowledge during training periods, that of tutors who must be competent, motivated and active in order to suggest concrete situations that are enriching, that of enterprises who must offer a sufficient number of stages, that of the trainees who must involve themselves both during the working time and during training, that of public officials who must oversee the effective application of measures that are taken.

ALTERNANCE AS A MODE OF POFESSIONAL SOCIALISATION

Alternance can be viewed first of all as a means to redefine the act of training. Indeed it simultaneously modifies the contents (it diffuses knowledge, know-how and comportment) and the modalities of transmission (it goes by way of apprenticeship in the work situation and favours the knowledge of action).

Alternance can therefore be seen as a way to acquire a certain professional experience progressively, conjugating practice and introspection, concrete apprenticeship and capacity for generalisation. The participation in the activity of production in fact generates a specific understanding, made up of technical know-how, but also of functional representations, of behavioural skills and of the capacity to anchor oneself in actual production. In apprenticeship, the activity is de facto formative, constructive of knowledge. Alternance programmes thus create a completely singular mode of acquiring experience because it is accompanied, encouraging a cognitive return, as many elements that come to aid the acquisition of operative competence. In this perspective, work in the enterprise is considered as formative and the alternance programmes appear to be useful in the acquisition of skills, because they are based in work situations for developing the training. There is indeed therefore a double movement. On one hand, the use of knowledge that is acquired, notably during initial training, necessitates a control of the context of the action and cannot therefore be accomplished outside of the workplace. On the other hand, work itself generates new and specific knowledge.

For all that, this ideal situation is not always encountered. In numerous situations, notably in programmes set up in the last several decades for youth with low levels of qualifications, training acquired is very limited. Alternance concerns, in effect, mostly the least qualified people for brief lengths of time and with content more relevant to the acquisition of behavioural norms than know-how or cognitive apprenticeship. One has been able to see this, proposed actions for young people 16 to 18 years of age without qualifications. They are often assured more informal training, less supervised (the tutor plays a hierarchical role rather than that of trainer) and giving place to the acquisition of limited knowledge and privileging apprenticeship of the conditions of the exercise of salaried labour, familiarisation with carrying out work by the realisation of preparatory and intermediary work offering only minor responsibilities.

Alternance can also be seen as a specific mode of professional socialisation. It is thus that Cl. Dubar analysed the programmes in favour of young people between 16 and 18 years of age without qualifications.[5] This in effect demonstrated the emergence of a new mode of post-academic socialisation in which alternance allowed "to prepare for new conditions for labour market functioning as the result of the crisis." In this sense, it is a particular form of professional socialisation because it allows "the facilitation of access to situations marked by insecurity." But it also plays a more social socialisation role consisting in "avoiding lasting marginalisation" and "assisting in the construction of projects and structuring identities."

ALTERNANCE AND REGULATION OF THE LABOUR MARKET

But alternance can also be considered as a mode of professional insertion and of labour management.

In this optic, alternance programmes appear as the means of assuring orientation of people, of promoting mobility, of controlling the flux of labour, of guaranteeing better selection because it happens slowly and within the work situation.

To this is adding the fact that alternance programmes modify salary costs in rendering them less onerous for the enterprise due to systems of tax abatements instituted during the 1970s and the old system of progressive remuneration. In addition it allows for special laws that alter the current forms of employment and thus contribute to the creating insecure situations and to the transformation of the forms of employment, going as far as appearing to be substitutes for ordinary employment.

Finally, alternance, even if it does not constitute a remedy for unemployment, can constitute a modality for managing unemployment. Evaluation studies have in effect show that the programmes set up in the 1970s have had little impact on the overall volume of employment, a fortiori on unemployment. The most they have accomplished it to displace unemployment in time or between populations.

When all is said and done, alternance can be analysed as one of the essential components of professional transition.[4] In effect, it indeed has all the traits that one attributed to the transition, when this notion was proposed to take into account the transformation of conditions of access to employment of youth during the 1970s and 1980s. Alternance programmes are decidedly in fact socially structured moments (by legislation, by the setting up of specialised institutions). They bring together diverse actors by redefining their respective roles. They concern at the same time training and mobilisation of the workforce. They foster the sorting out of populations, contribute to their categorisation and function as a sort of system of workers last call.

NOTES

1) *This text refers to certain ideas that we have previously developed in a text entitled: "The theoretical stakes of work-liked training" and published in the book Work-linked training, La Documentation Française, 1992. This synthetic work contains a very complete bibliography.*

2) *L'alternance école-production», Paris, P.U.F., 1993*

3) *Cl. Dubar et alii, The other youth, young trainees without diplomas, Lille, PUL, 1987.*

4) *For the definition of this notion, see J. Rose "The organisation of professional transitions: between socialisation, mobilisation and reconstruction of the rapport between work and employment," Sociologie du travail, n°1, 1996.*

TRAINEES IN THE WORKPLACE - POLICY PRIORITIES OF EMPLOYEES

Mr Jari-Pekka Jyrkänne

In Finland on-the-job training is comprised of two basic types: apprenticeship training and on-the-job learning.

Apprenticeship training

Apprenticeship training is primarily intended for adults, which have already passed the typical age of students completing a secondary education. On-the-job learning, on the other hand, is a permanent part of a secondary education.

Of those participating in apprenticeship training, over 80 % are 20 years of age or older. Training is based on an employment contract, in which the apprentice and employee agree to the training to be performed on the work place. Ultimately, a National Board of Education representative approves the section of the employment contract concerning training, provides funding for the training conducted at an educational institution and, according to representative's discretion, pays the employer a separate training compensation. In certain cases the employer can receive an employment subsidy for the period of employment.

The enterprise is responsible for providing training that occurs during the work and the educational institution is responsible for providing basic instruction in occupational theory. Training is based on the foundations of vocational qualifications, which have been granted three-fold approval in the system of competence-based qualifications. The apprenticeship can also take the form of a mutually-agreed employee-employer training, which is not based on separate qualifications.

One of the best qualities of an integral work-related training is its inclusion in the qualifications system. Students already possessing work experience, who prefer not to attend courses, can immediately obtain vocational qualifications in connection with work. These qualifications are generally recognised on the labour market and the student can update their vocational expertise, obtain additional skills and reinforce their position on the labour market.

On-the job learning

On-the-job learning is firmly based on the principles of educational curricula as approved by the National Board of Education and on the educational curricula of the vocational training institution in question. In ongoing educational curricula reforms, a six-month (minimum) on-the-job learning session is being included in all secondary qualifications for youths. Previously, this session was a great deal shorter in duration (minimum of 4 study weeks) and was not included in all educational curricula.

In on-the-job learning the apprentice does not usually have a formal employment with the company in question. The session is part of the educational insitutions' normal instruction. The company and educational institution decide upon the practical content of the session. In general the purpose is to provide the apprentice with an idea of the requirements they can expect to find in the workplace. If the session is divided into shorter periods, the student can initially gain a basic touch for the various tasks of the vocation of their choice through on-the-job learning.

The primary goal of on-the-job learning is to lower the barriers found between working life and education. The session can acquaint the apprentice with the tasks of their chosen field, thus providing them with a motivation to study, while making the first job as accessible as possible to the student. In any case on-the-job learning is an important method of improving the quality of training and establishing a permanent and vigorous interaction between educational institutions and working life.

In regards to the working life, a higher participation in the training available within one's own field promotes the "pedagogisation" of the working life and makes the updating of expertise, which is required for the development of the field, an essential part of every job routine. As the training intensity of the workplace increases, it is good that the performance of work and vocational development are linked with one another as related matters, both within the company's organisation and among the personnel.

Participation in labour market organisations

In the beginning of 1998 central labour market organisations gave their recommendation on the promotion of workplace training based on a collective bargaining agreement. The recommendation includes the entire labour market, with the exception of the public sector. The key principles of the recommendation have also been taken into consideration in vocational education legislation.

The main thinking behind the recommendation is the branch-based determination of the need for establishing new on-the-job learning study places, resulting from the new educational curriculum system. The National Board of Education will provide its expertise to assist in this effort. If a certain field requires improved efforts in the establishment of new study places, the employee and employer organisations of that field will agree to the inclusion of procedural regulations in their employment contracts.

Procedures involve the deciding of apprentice enrolment at the company level. The employers should commit themselves at the company level in such a manner that the arrival of apprentice to the workplace will not affect the employment or status of employees already working at the company. This sort of commitment means that the personnel can, even under uncertain employment circumstances, be assured that the presence of apprentice will in no way dismiss the employment of permanent personnel.

With this type of commitment, the collective bargain stipulates that changes in the number of employees due to fluctuations in production can be made, independent of the presence of apprentice. In other words, additional personnel required for normal work processes must be formally hired, whenever the company's operational volume increases. On the other hand, if reductions in personnel are required due to the seasonal, economic or market situation, it does not concern the apprentice.

The recommendation of the central organisations emphasises that on-the-job learning is always a question of training, not the actual performance of work. Another extremely important point is that the company personnel can actively participate in the implementation of training. Appropriate and expert guidance on the job is indeed the primary prerequisite for a successful training session. Youths require a positive atmosphere for learning.

Training in the workplace is an indication of the field's commitment to the development of training, but it can also, at best, support and motivate personnel to perceive their own vocational expertise as a dynamic process, in which the seeking of new qualifications via training is an established and integral part of vocational development.

Salary issues are also addressed in the recommendation. In general, on-the-job learning does not involve actual employment contract, but, in certain fields, because of the danger job or the financial risk involved in the job, employment contract is required. In such cases, regulations (related to salary) are concerned this type of employment, for the most part, as subsidised study.

The payment of apprentice is primarily affected by whether the apprentice is a youth just entering the field or (as is usually the case) an adult possessing more work experience, who is in the employ of the contracting company.

THE MECHANISMS OF QUALITY INNOVATION IN THE DUAL SYSTEM – THE FUTURE OF THE DUAL SYSTEM

Mr Ernst Uhe

Introduction

"The mechanisms of quality innovation in the dual system" fits in well with the general theme of the conference "New challenges for the co-operation between training and work" as well as with Forum 1, which deals with the European solutions of the problem of co-ordinating training and work. The theme tries to explain in what way quality innovations such as necessary improvements due to developments in technology and economy can be carried out by and permanently anchored in a specific vocational training system, i.e. the German dual system. The second part of the title, "The future of the dual system" is closely related to the first. If we are not successful in effecting "Mechanisms of quality innovation" – that is to launch necessary processes of modernization – then the future of the dual system in the Federal German Republic will be seriously endangered.

The following four aspects describe necessary changes through modernization if the system is to continue in the future: restructuring the vocational system, changes in training locations, finance regulations and entitlement system.

Before discussing the future of the dual system, a few principles will be highlighted. In Germany, dual system means that many young people from about 16 to 21 years of age will generally follow a training period of two to three-and-a-half years in two training locations – in a company and at a vocational school. On average, training in the company constitutes about two thirds of the entire training and training at school one third. Both places are attended periodically. The individual company decides if a training position will be offered whereas the state only regulates the legal framework by a corresponding vocational training law. The vocational school and its financing, however, are the sole responsibility of the state.

The dual system enjoys quite a good reputation on an international level. In Germany though, it is the subject of serious debate. The following profile gives a simplified overview of the core strengths and weaknesses:

PROFILE OF STRENGTHS AND WEAKNESSES IN THE DUAL SYSTEM

STRENGTHS	WEAKNESSES
integral vocational socialization: Combining learning with work	rigidly tied to a vocation with insufficient opportunities for new experiences in view of an increasingly international society and economy; insufficiently cosmopolitan
fast conversion of new qualification needs in training processes (on an implementing level)	slowness and lack in flexibility on a standardization and regulation level
relatively favourable allocation mechanism (transfer from school to training and from training to work)	restricted job mobility, "dead end" characteristic of training
strong social integration through work place and strong political integration through inclusion of social partners (corporate regulation)	deficiency in independence and individual initiative; weaknesses in acknowledging individual achievements in the training process
favourable financing system in terms of national economy and individual enterprises	training places on offer depend on cost calculations of individual enterprises and on changes in the economic climate, regional disparities
high average qualification level of workforce (medium level)	lack of high qualifications; insufficient permeability between medium and high qualification levels

Restructuring the vocational system

There are at present approximately 360 occupations that require training for skilled workers in Germany. These have been developed in a long tradition and represent a generally quite rigid system. New occupations were not developed for many years and only over the past few years have new occupations been created, especially in the area of information and communication technology. If the system is to last, then the creation of new occupations must be facilitated. The first steps in this direction can already be observed.

Furthermore, it will be necessary that training regulations allow for more flexibility in order to enable reactions to technical and economic changes. One proposal under discussion in Germany is to unite various individual occupations to about 100 foundation or basic occupations. If this concept is considered fit, it must be pointed out that it will be a difficult and lengthy process considering the variety of interests in the world of occupation and work. During the process of this restructuring, we should keep the structure according to occupations, i.e. the principle of occupations in professional training should not be abolished. I consider this to be especially favourable for the transfer from training to work.

Modulization, which is also under intense discussion, would be the opposite of the above. Its introduction means that the 360 occupations would be replaced by a number of modules. The introduction of basic occupations on the other hand would mean that additional competencies which are occasionally also referred to as key qualifications would gain a special status in training. Specialist knowledge would not be rendered surplus but only gain a different status.

Changes in the individual training places

If changes of quality are carried out "locally", they are especially effective. We therefore have to ask ourselves which modernization measures should be carried out in both training places. For the role of companies, the introduction of more flexibility into the presently quite rigid training regulations will be necessary. These should take into account special features of companies and regions to enable fast reactions to changes in technical, organizational or economic conditions. Every company has its own special features and "learning locally," i.e. learning at the workplace, is of special significance. This learning process in the "real world" is very important for the "co-operation between training and work." The learning situation during training should reflect the future work situation.

Concerning the other training place - the vocational school -, it will be necessary to think about its mission, opportunities and restrictions. The conditions have changed considerably during the 80 to 100 years of its existence in the current form. Not all students are young people anymore. Many students are adults; the percentage of students with A-levels is continually increasing. Its educational mission (in the fifties described as the professional, social, humanist and religious mission) must be redefined.

In addition, the ratio of training in companies and at school must be changed in several aspects: the old definition that the vocational school is responsible for theory and the company for practical learning has long ceased to be valid.

Rigid separation between school and company does not provide any answers to today's challenges. Some occupations have a large, others a small element of theory. Flexibility is also called for in these cases. The learning concept presently favoured in didactic discussion links the training places and practically enforces co-operation.

Financing vocational training

Today, the companies carry a large proportion of the cost of vocational training. They pay for instructors, training materials, trainee payments etc. The federal counties and local authority districts finance the vocational schools. This relatively high burden on individual companies has in part led to training refusals - that is to say that companies bid their farewell to training and instead turn to the labour market to find skilled workers and employees. If the dual system in Germany is to continue its success, then a redistribution of financing will most likely be unavoidable, such as allocating training costs equally between companies that do offer training and those that do not. In this context, chamber and trade solutions should be given preference to nation-wide regulations. The building industry is a good example for a successful redistribution of financing.

Entitlement system or: "What can I achieve via training in the dual system?"

Vocational training has led a shadowy existence in Germany for many years. In contrast to general education via A-levels to university and academic qualifications it was mainly reserved for the lower and middle classes. It hardly offered any opportunities for professional promotion. This again was reflected not least in the relatively poor pay for those who took up vocational training.

Many difficulties and detours characterized post-acquisition of the right to attend university. The equal value of general education and vocational training, which has long been acknowledged in educational theory (education via occupation), has only partially been realized in terms of education policy during the last decades. Fewer than five percent of professionally experienced people without A-levels attend university.

Modernization here means to extend the dual principle of learning in two training places to the tertiary education sector. Vocational academies are a beginning. Dual study courses at universities for applied science have already been established in several regions in the Federal Republic. This change in education policy requires a revision of the regulations. The schematic assignment of educational qualifications and occupational careers must be broken.

Conclusion

Many reform details still need to be defined. Many individual questions, which are important for the concrete shaping of vocational training but cannot provide a solution by themselves, have not been addressed in this paper. It is, however, in principle possible to improve the co-operation between training and work within the dual system in Germany by implementing quality innovations. On balance, the conclusion must therefore be that the dual system does offer mechanisms for necessary modernization. If these are used, the system of vocational training will have a positive outlook to the future.

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FORUM 2: IMPROVING THE IMPACT OF EU TRAINING PROGRAMMES AT THE NATIONAL AND EUROPEAN LEVELS – CASE LEONARDO DA VINCI PROGRAMME

UTILISATION OF EU EDUCATIONAL PROGRAMMES AT THE INTERNATIONAL AND EUROPEAN LEVEL – CASE: THE LEONARDO DA VINCI PROGRAMME

Mr Markku Markkula

Dissemination is a decisive success factor

Developmental project results and the experience gained from them only have meaning if they are implemented and lead to operational change. The importance of disseminating results and experience has increased particularly in recent years.

In OECD circles the significance of disseminating the results of research and development work was realised in the late 1980s. The new political line was that the majority of economic benefits gained from new technologies would preferably be the result of technological diffusion, i.e. the adoption of available technologies over developing new ones. This very realisation – the dissemination of results – has now risen to the forefront of educational development.

Leonardo's influence can be multiplied

The Leonardo da Vinci programme and other EU educational programmes have created innovative projects in various parts of Europe. Support of this regional innovation and initiative has been considered a positive aspect of the programme, and it is hoped that this support will also continue in the future. According to estimates, the programme's influence on educational policy can significantly increase the support of disseminating results.

Challenges in the dissemination of results and utilisation of educational programmes arise from the needs of the educational sector. On the other hand, project results easily remain at local level, and cannot even be utilised at the national level. Project directors are best qualified to disseminate the results and experiences of their own efforts. At the national and European level, however, project networking, project director consulting and the systematic co-ordination and allocation of resources is required. We need national and European dissemination strategies. The challenge is the same for all EU operational programmes. The dissemination of results in the Leonardo programme can also serve as a model for other, similar programmes.

The success of international educational programmes could be further enhanced, if the results and their dissemination – and in turn the benefits gained from these – were emphasised in project evaluation. In its most basic form the issue of disseminating results and experience is indeed a new kind of philosophy. Project-based modes of thinking, in which participation in international co-operation and working together are central, should be transformed into a result and dissemination-centred mode of thinking. Thus, the final product and its influence would be emphasised more in international projects.

Dissemination is thus other than just marketing, communication or informing. Social change does not occur quickly, which is why it is crucial to communicate the process nature of dissemination. The idea must be saleable over the long run, in order that the customer will grow to accept the new thing. Dissemination is convincing. This is especially emphasised in the educational sector. Project directors must often even teach their target group to behave and think in a new way.

Systematic work brings results

Using our project's (Methods and Tools for Effective Dissemination) plan of action, we seek dimensions and depths that depart from conventional modes of thinking of dissemination influence. By means of work seminars, the commitment of participating project personnel to dissemination was reinforced and its continuous, interactive process nature was emphasised. For many of the participants, the most important lesson learned was that considerably more time should be devoted to dissemination than originally planned. The advantage of systematic dissemination and the significance of dissemination, durig each phase of the project, were also emphasised.

When dissemination is conducted effectively, the following benefits are achieved:
1) project entity is outlined
2) various target and interest groups are committed
3) one learns about their own experiences and those of others
4) networking aids in establishing an image
5) new projects are created
6) one learns to learn together with others

In addition, satisfied customer use products or service concepts which are the result of project work, or, as is most often the case, adapting it to suit their own needs.

Dissemination guide

Based on our project, we have published a dissemination guide in English. Influential dissemination is a systematically executed process, based on the following four criteria of dissemination philosophy: 1) to assist and inspire people to develop, 2) to increase the realisation of the idea of lifelong learning and its implementation in the workplace, 3) to change the practice and philosophy of teaching and 4) to effect the extensive adoption of the above-mentioned in society. These criteria served as the guiding light in drafting the guide.

Dissemination is an essential part of a project from its very beginning. The guide sheds light on the dissemination occurring in international educational projects and contains four mutually supportive approaches 1) in dissemination theory, 2) definition of concepts, 3) development of tools and 4) the presentation of various dissemination methods and channels. The guide also contains a large number of illustrative practical examples.

The guide has a five tool "Dissemination Wheel", which is intended for use as an aid in dissemination planning. By means of these tools, the project's essential aspects can be crystallised (Key Tool), its objectives and added values can be specified (Goal Tool), and the necessary measures for alteration and an analysis of dissemination preventative/promoting factors can be determined (Change Tool). Furthermore, the tools can be used in the phasing of project and dissemination measures (Framework Tool) as well as in the detailed drafting of dissemination plans (Planning Tool). The tools can be used systematically or individually, as one sees fit or in accordance with the project status. Testing of the tools in the Leonardo project has demonstrated that they could be of great assistance in both the planning and realisation phases of dissemination.

Mr David McCullough, Mr Sergio Corti and Mr Johan van Rens

BUILDING ON AND DISSEMINATING PROJECTS RESULTS

Mr Sergio Corti

The Context

The basis for building on and disseminating the results of projects is imbedded in the text of the Council decision establishing the second phase of the Leonardo da Vinci programme. This applies both for the transition between the first and the second phase and for the dissemination strategy during the second phase.

In fact Article 5.3 of the Council decision states: "In cooperation with member States the Commission shall take the steps described in the Annexes to build upon the achievements of the first phase of this programme ...." and "ensure the smooth transition between those actions developed in the framework of the first phase .... and those to be implemented under the second phase."

The need for a strategy

In order to implement the objectives of the programme, to fulfil the requirements in terms of capitalisation and dissemination of results, to create an European Learning Area for the achievement of an Europe of Knowledge it is essential to analyse, synthesise and build upon the achievements of the programme.

This process needs a well developed strategy for spreading information on the results of projects, their use and their possible impact.

This strategy has to be part of a vision and should be based on concrete elements which would allow the required work of analysis of the results available so far, regrouped along priority themes to be defined. It should contain an action plan of activities and should be based on a sound knowledge of what is existing.

The need for an information system

In order to ensure that information at all levels about the available results, their update, the thematic analyses based upon them reach the intended target groups, a complex information system, with a variety of components has to be put in place. This system has to rely on a stock of basic elements which has to contain all pertinent data and which has to be completed and updated according to progress and to specific needs.

These basic elements may be of various nature and be based on a variety of support and should cover the spectrum of available technologies, old and new (documents, data bases, web pages, interactive discussion fora, meetings and seminars).

Information: what are we talking about?

When talking about information, there is a need for clarifying what it is meant, in order to avoid confusions due to the use of a different terminology to indicate the same thing.

We can basically identify three levels:

- General information about the programme
- Specific information on the projects (dissemination)
- Thematic analysis of results and of innovations in particular (building on the achievements and ensuring impact)

Each one of these levels is essential to the success of a "dissemination" strategy; each one has its own specific rules and needs and each one has to be adapted to the target groups we want to reach.

State of play

The following are some of the elements we have to consider in order to fulfil our task:

a) Build an updated data base containing all the results of the Leonardo da Vinci first phase projects, ready to integrate results from projects of the second phase and from other projects developed in the context of Vocational Training;

b) Perform thematic analyses centred on a number of priority themes, to be defined and constantly updated;

c) Promote actions in order to induce decision makers and practitioners at all levels to make use of these analyses.

d) Organise the second "Training 2000" event before the end of the year 2000, as a showcase of achievements so far, and encourage National Agencies to organise similar events on a national/regional level.

Conclusions

The work of the Commission in the near future will concentrate on the definition of a medium and long term strategy for disseminating and building on results. In doing so a variety of elements will be taken into account, including the development of an appropriate information system.

The Commission will also seek the collaboration with other organisation concerned: Member States, Leonardo da Vinci National Agencies, CEDEFOP, European Training Foundation and other Commission services managing programmes and initiatives relevant to Vocational Training.

It will finally develop and implement the "Joint actions" measure, foreseen in the Council decision, in order to build synergies with other programmes.

Mr Manfred Schüller, Mr Valeriano Munoz López, Ms Claudine Boudre-Millot, Mr Mikko Nupponen, Mr Colin McCullough,Mr Sergio Corti, Mr Johan van Rens, Mr Markku Markkula and Mr Anders Hagström

EUROPE
into the New Millennium

CONNECTION BETWEEN COMMUNITY POLICY AND NATIONAL POLICY - FRENCH EXPERIENCES

Ms Claudine Boudre-Millot

Introduction

In spite of the geographical distance that separates our two countries, in the matter of education and training Finnish culture and French culture are very close. The French partners in the Leonardo projects have always been well understood by our Finnish partners. All through the paper presented by the Director of Vocational Training of the Finnish Ministry of Education, I realised every more just how close Paris is to Helsinki.

In France, it is the Ministry of Employment who defines and co-ordinates policies for vocational training. But the Ministry of Education plays a fundamental role because it is the largest player in the training sector. For this reason, in France as in Finland, vocational training is largely dependent upon teaching establishments. This has a historical sense. Immediately after the French Revolution, the role of business was looked upon with suspicion. It was preferable to count on schools for vocational training of the young. At this time, the deliberate choice was made to move away from corporations.

Over the past 15 years obvious changes have come about, and we have largely admitted the interest in opening schools to enterprises, and today the quasi totality of our vocational training is work-linked training. The situation has evolved enormously, and one can no longer imagine setting up a new vocational training programme without associating school and enterprise.

We have a double system of work-linked training ('alternance'). On one hand, we have a system that leaves the young person with the status of student – this covers 70% of the number of those enrolled in initial, non-university vocational training – and a alternance system within the framework of a work contract covering apprentices (30%). These systems both lead to national diplomas as defined within the Ministry of Education in the framework of consultative professional commissions (CPC).

This rapid review of the national French context allows us to situate my following remarks.

EU programme effectiveness

The first question will be directed to the impact of Community programmes on national policies. This question continues to come up because LEONARDO, SOCRATES, the ensemble of programmes have a sense, deserving to be financed if they really influence the policies of our countries. This issue is always extremely embarrassing, even destabilising.

A meeting was held in Dublin in December of 1995 at the end of the Petra programme, with the object to assess the influence of the programme on national policies. Obviously, the smaller the country, the easier it is to identify this impact. For the larger countries, it is difficult to evaluate such things. In France, we have 3,800 Leonardo scholars a year, while there are about a million young people of the same age. The proportion of 4 grants per 1,000 young people does not permit visualisation of its impact on training, even if we are completely convinced of the immense qualities of the mobility. Being difficult to pinpoint and difficult to evaluate, this effect is even more difficult to measure in that it is not there where we expect it to be.

When asking the question about the impact of Community programmes on national policies, we can use an illustration, one that we are very fond of in France, that is, of skylark pâté. This pâté is made with a mixture of skylark and beef in the proportion of one bird/one cow, the Community programme being the skylark and national policy being the beef.

Actually, the question is not as much to know what the degree of impact is as the know really what impact one is looking for, and here I would like to come back to the analysis of an article that was the foundation of the Leonardo programme. Let us go back to the Treaty.

The article supporting vocational training is extremely ambiguous. The one concerning education is much clearer. Only the States' role is confirmed here. As concerns vocational training, things are more complex. The article tells us: "a Community policy that supports and rounds out national policies." In the field of education, there is no Community policy. There is exchange among various nations' policies. In the field of vocational training, there is certainly a Community policy, but one that comes as support of and complement to national policies. Here we are, in the exercise of subsidiarity, in all its subtlety.

One quite quickly gauges the Commission's temptation to have a wide-ranging Community policy, risking to encroach upon national policies, and the equally great temptation for the Member States to follow a protectionist policy in the domain of vocational training.

This all poses extreme difficulties and enormous challenges that must be met in the day-to-day practice of national co-ordinating authorities. I am, myself, an official in the French Ministry of Education, but I am also the Director of the LEONARDO Agency. Because of this, I always have the sensation of playing the role of a double agent, to be at the same time at the service of national training policy and at the service of Community policy.

Examples of friction

I would like to give three examples of the friction that can sometimes be provoked because the policies are not always absolutely convergent. The major points of the White Paper have served these past years as a reference about Community policy.

The have very largely served as a basis for the Leonardo 1 programme, the priorities defined in this Paper being the priorities cited in the Leonardo programme.

I previously noted that in France we have a double system of alternace. On one hand there is a very strong tradition of educational institutions being responsible for vocational training, and on the other hand, a system of apprenticeship with a work contract.

When the White Paper, and then the Leonardo programme picking up the themes of the White Paper, spoke of developing school/enterprise links, it was quite clear that it was a question of developing apprenticeship under work contract along the German model. And yet, the German tradition in the domain of training is very different from ours.

These differences have complicated the task of the Leonardo protagonists. When we had projects based on alternance we knew that, from the Commission's point of view, a good project was a project allowing advancement along the path of apprenticeship where the youth is placed, for his training, essentially under the control of an enterprise. During this time, the French State was not completely willing to renounce a system where the youth remained in the scholastic context and continued with the status of scholar. The project, developed one way or the other, was not the same.

It was a question of knowing if the Leonardo programme was the occasion to promote apprenticeship under work contract in France or to improve the quality of the partnership between school and enterprise within the framework of alternance under the scholastic status.

In the same manner, we have experienced a very difficult division under the theme of the struggle against exclusion where, from the Community point of view, the school had not played its role well. School left people excluded, excluded from knowledge, excluded from the work world where they could not be inserted professionally. It was therefore necessary to put into place "second-chance schools."

Our nationwide system of education and training recognised these weaknesses, recognised its mistakes, knew that there were outcasts, but continues to think that "prevention is better than cure." It prefers to emphasise its efforts on first-chance schools before thinking about a second-chance school.

There again, our position was difficult. We set up a series of projects with vocational schools that were addressed to those in serious trouble. These schools had particularly successful methods in the domain of the struggle against exclusion and thought that transnational co-operation could help improve their situation. In a certain number of our establishments, we played the card of improving the first chance rather than to participate in second-chance schools.

Something that revealed itself to be even more sensitive than the distribution between the two forms of alternance and the distribution between first-chance schools and second-chance schools was the problem of validating the knowledge acquired through the vocational experience.

In France, the national training system is the validation system, as well. The diplomas are defined by the ministers concerned: Education, Agriculture and so on. The State guarantees, in the legal sense, their validation.

We have academic diplomas that are essentially the end point of initial vocation training. For the moment, they have a hard time taking into account knowledge acquired through professional experience.

Our system is rather binary. One could take advantage of an initial vocational training, have it validated, receive a diploma, and even if one was not a very good professional, our social organisation allowed one still to profit rather well from this initial diploma. On the other hand, if one was not lucky enough to have benefitted from an initial vocational training, or if one did not have the chance to validate this vocational training, even if one becomes a highly qualified professional, one remains unrecognised within one's enterprise and one risks being badly paid.

We are quite conscious that this situation cannot continue.

For almost a dozen years now, attempts have been made to allow workers in enterprises to validate their skills. If they are able to demonstrate a solid professional experience, they can acquire national diplomas through accommodating procedures.

The assessment made by the Commission was close to the national assessment. The Commission started from the principle that wage earners do not have the possibility of making known their knowledge, their skills, if these have not been acquired in an academic setting. But the response proposed by the Commission was very different. The European method of accreditation of skills does not confirm the validation role that the State assumes, but proposes the transfer of this role to the enterprises themselves.

If one conforms to the position of the Commission, tomorrow, it will no longer be the State who will guarantee knowledge, qualifications and competency, but it will be employers themselves who will be the judge of this.

For a country like France, where the social organisation makes reference to the hierarchy of diplomas, to attack the State's role as validater would immediately cause an enormous social destabilisation. Indeed, the collective labour agreements within enterprises are organised around diplomas. To force the system into greater flexibility, along the lines of certain Anglo-Saxon countries, would not occur without causing genuine social destabilisation.

The ministries involved, the Ministry of Employment and the Ministry of Education, have given enormous thought these last months to this and their positions are presently clearly articulated: we cannot renounce national diplomas, and we cannot allow validation methods that are much more flexible where the responsibility would be confided to employers tomorrow and no long rest with the State itself.

New initiatives

In these three domains that I have just cited, there was divergence between the French State and the Commission with regards to alternance. France is not limited to the development of apprenticeship under work contract. Nor have we completely followed the Community policy of development of second-chance schools, and we have also resisted the European method of accreditation of skills by preserving our system of national diplomas.

However, that is not to say that Community policy has been without effect. We are not hermetically sealed against all of these propositions, and we have perfectly sensed that a dialectical rapport has been permanently established between Community policy and national policy, within the Leonardo programme. The programme is privileged territory for this dialectic.

It is certain that even if we have not chosen all-apprenticeship, in alternance with scholastic status an additional effort is all the same being make today to allow a better integration of the role of enterprise as trainer. We no longer speak of alternance with scholastic status but of "integrated vocational education." Community policy is probably not without effect, having allowed the promotion of the role of enterprise as trainer within work-linked training with scholastic status.

In the same fashion, for those at risk for exclusion, a new system has been set up: this is "the new-chance school." This system consists essentially in networking the ensemble of trainers who take charge of these populations.

In the domain of validation as well, we have not remained insensitive to the work initiated by the Commission.

Certain validation automates have been examined and will be progressively integrated into traditional validation systems. The system for validation of knowledge acquired through professional experience, that is to say, access to national diplomas on the basis of acquired professional competence and not on an academic basis, is under development. All the evolutions will be marked by Community reflection.

Common foundation established by the Leonardo programme

At the request of the Ministries, the Leonardo programme has played its role of innovative laboratory perfectly. Since 1997, the Ministries have requested that project results be analysed with regard to the three subjects mentioned above. The successes as well as the failures have been taken into account. Recognised national experts, specialists in these themes, have been charged with developing a certain number of "recommendations" to be brought to the attention of training decision-makers. The results of their work were presented in Paris in April 1998 during a meeting at Chemistry House.

The impact of Community programmes on national policies remains a difficult objective to attain. Divergences between Community policies and national policies are sometimes great, but the Leonardo programme has been able to define a common ground. In this programme we can find an extraordinary motivation to go farther, to do better in the domain of vocational training.

This domain is closely linked to the social life of our countries and is therefore an extremely politicised domain. All that one usually qualifies as the exchange of good practices, the transfer of pedagogy, etc, is in fact a means to federate this common will in order to improve vocational training.

I said earlier that I felt the great closeness between French national policy for vocational training and Finnish policy. This is very reassuring to me, because we probably need to federate our energies between States.

The World Trade Organisation is going to meet in a few days in Seattle and, for the first time, deal with sectors that, in a country such as France, for the most part come under public service. I would like to address education and training.

We, at the French Ministry of Education, are convinced that these sectors come under public service and national solidarity. It is not the Member States who are going to negotiate, but the Commission in Brussels. But I believe that we should make our common positions heard. Education and training are not merchandise. Whatever the motives of financial institutions and of the multinationals who wish to get involved as well, we should be capable of showing that through a certain number of projects within the framework of the SOCRATES programmes and the LEONARDO programmes, we have developed a common ground, we have found elements that allow the preservation of major social benefits of our countries.

Conclusions

When the Leonardo programme was launched, Phase 1, "to guarantee the improvement of the quality of the systems" was to receive the smaller part. Phase 2 should "support development of the market" and for this receive the larger part.

When the programme was set up, the provisional budget gave one Euro to the "system" for every two Euros allowed for the market. Today we have budget figures for the first five years of the programme, and it is obvious that while the market was certainly present, it did not take on the dimension that was predicted, while the systems made themselves known. Today, the budget for Phase 1 is largely as big as the budget for Phase 2.

As a consequence, one may believe that within Europe, systems continue to endure, that vocational training is still the affair of public service and that public service vocational training has a long life ahead of it.

Leonardo will contribute to this by allowing co-operation among the systems. The field for development of the programme is wide open.

HOW TO IMPROVE THE IMPACT OF EU PROGRAMMES - FINNISH EXPERIENCES

Mr Mikko Nupponen

Finland has participated in EU training programmes since 1990, when Finland was able to participate for the first time in the COMETT programme. In 1995 EU membership then opened full access to all EU-programmes. In this short article I will highlight some of our experiences in improving the impact of the programmes.

Maximising participation

In the beginning our national strategy was to maximise participation in the programmes, with the aim to have as many Finnish organisations contracting projects as possible, and as many as partners in projects contracted by other countries as possible. The idea was in this way to support the internationalisation of education and training in Finland. On an operational level, various seminars, conferences, contact seminars, etc. were organised to support this objective.

This strategy has proved to be successful, and Finnish organisations have very actively participated in various programmes. Very little attention was given, however, to the results of the projects funded by the various EU programmes.

Maximising impact

After some years of participation, the focus has been changing. Various players in the field, such as the European Commission and Finnish Ministry of Education, have begun to emphasise the importance of dissemination of the project results. It has been noted that participation is not enough –too often the results of the projects go to the "shelf" and remain unused. This means that EU funded projects are not reaching the impact that was expected from them.

For these reasons, the Finnish Leonardo Centre has since 1998 undertaken different actions to encourage the dissemination of results and to improve their impact.

At the same time the national strategy has changed: from maximising the participation to maximising the impact.

Workshops

In 1998 Finnish Leonardo Centre, in cooperation with external experts (Ms Riitta Suurla, Mr Markku Markkula) organised four workshops, to which 13 Leonardo da Vinci project coordinators were invited. The aim was to help the projects to develop their dissemination strategies. To this aim, some practical tools were developed. The promoters found this work very useful. It became clear, that whilst the project promoters often are experts in their own area of substance, they often lack experience on how to market and disseminate their results. Very often the promoters did not even realise the full potential of their projects.

Guidebook

Based on the experiences of the workshops a practical guidebook was written. The guidebook addressed the issue of dissemination from two angels. Firstly it reflected theoretically on the importance of the issue from the point of view of society. Secondly, it gave practical advice for promoters on how to disseminate the results. The tools developed in the workshops were presented in the guidebook as well in the form of case stories.

The guidebook was originally published in Finnish (Suurla-Markkula-Leonardo-keskus: "Vaikuttavat tulokset"), but it soon became clear that there is considerable interest in the guidebook also on a European level. Therefore the guidebook was translated into English and adapted for international use with the support of the European Commission. It was published in November 1999 (Markkula - Suurla - Finnish Leonardo Centre: "Effective Dissemination"). More information on the guidebook can be obtained from the Web at http://www.leonardocentre.fi/dissemination/disse.htm

National Call

In the workshops it became evident that in addition to know-how the projects often lack resources to disseminate their results. Therefore, in the autumn 1998 a small national call was organised, where those Leonardo projects which had or were about to finish were able to apply for some additional funding for their dissemination activities (less than 20 000 Euro per project). A total of 10 projects were selected for funding and these "dissemination projects" were realised during the first half of 1999.

The main feedback from this 'exercise' was that even a small additional financial support greatly improved the dissemination activities of the projects. Typical actions were: the translation and adaptation of material into Finnish; the adaptation and transfer of the results to new economical areas; and the implementation of a new training methodology in everyday training activities. In practical terms the projects re-worked their products, translated, arranged dissemination seminars, conferences and had negotiations with national authorities.

Overall, the results were with some exceptions very promising and this type of national call is likely to take place again in the future.

Valorisation

In the spring 1999 the Commission also launched its "valorisation" initiative. Here the aim was to launch national surveys where experts would evaluate a number of Leonardo projects linked to a certain theme, assess their results and to make proposals and recommendations for national authorities on interesting results as well as on how they could be used on a national level.

Where as the dissemination activities are of the "bottom-up" type and the responsibility for them primarily lies on the promoters themselves, the valorisation activity is more of the "top-down" type with external experts studying the projects and making proposals on how to improve their added value.

In Finland four themes were selected:

- Projects dealing with pedagogical and technological innovations
- How the projects have addressed the theme of cooperation between training organisations and enterprises, in particular work-based learning.
- The impact of the projects on transnational cooperation and transparency of qualifications.
- Transnational mobility and its impact on employability of young people

External organisations were selected to undertake these four surveys. The work has been now started and the results are due in the spring 2000.

Database

As Finland is in any case a "small" country, the number of Finnish contracted projects is limited. Therefore, to improve the impact of the programme it is important to follow also those projects, which are not contracted by Finland, but have Finnish partners. The problem here, however, has been the lack of a European database including this type of information.

For this reason the Finnish Leonardo Centre undertook to create such a database. The information was gathered from the in-house database at the Commission and by questionnaires to the Finnish organisations. The database is now available on the Web (www.leonardocentre.fi/prjdb) and holds information on about 600 projects, either contracted by Finland or having Finnish partners. In addition to the project information, the projects can themselves add information on their project results in the database. The database has turned out to be a very valuable tool to support work with disseminating the results and in improving the impact - the organisations undertaking the "valorisation" surveys have for instance used it to find projects linked to their respective themes.

Finally

After two years of active work on this interesting but demanding topic and after launching different initiatives and actions we have gathered good experiences on how to improve the impact of EU programmes. However, we feel that the work has just begun. During Leonardo II we have to continue the work and to evaluate which actions and activities are useful and should be repeated and which should be further developed.

In any case it has become evident that good cooperation between different players are needed if the impact of EU programmes is to be improved. Firstly, the projects have to learn to disseminate their results and see their potential impact. The National Agencies have a crucial role in supporting the project promoters, gathering and disseminating information concerning the projects and their results as well as acting as intermediaries between the projects and national authorities. National authorities and social partners, on the other hand, should realise that there is a wealth of good practices and valuable results springing from the EU programmes which can, and should be utilised in national development work. The European Commission, finally, should make available at a European level, information on the projects and their partner organisations as well as results in a way that is also accessible by a wide public.

The whole way of thinking should gradually be changed. From a more process oriented approach, where the emphasis is on participation in the programmes and experiences gained, one should move to a more product oriented approach where stress is on the results of the projects and their impact.

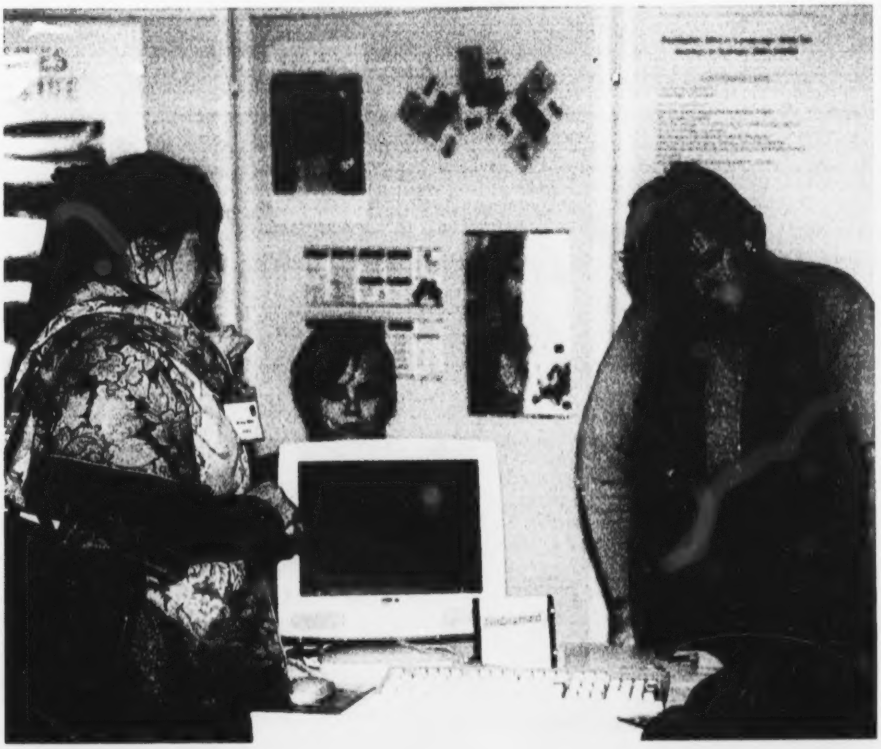
THE EXHIBITION

Linked to the theme of the conference, an exhibition presented on-the-job learning projects, which had received support from the Leonardo da Vinci programme - the EU programme for vocational training. Fifteen projects from nine countries were chosen to represent the wide-ranging and international character of the programme, and the specific aim was to present practical, real-life examples and solutions related to on-the-job learning. The exhibition was opened by ***Mr Timo Lankinen***, using a direct video link to the exhibition, which provided an opportunity to some of the promoters to present their project 'live' to the main hall audience during the opening ceremonies.

In the exhibition it was emphasised that internationality and close co-operation with the workplace are central to the Leonardo da Vinci programme. For all the projects displayed, it was evident that the rapid internationalisation of the workplace demands wider and closer co-operation relating to the structures as well as content of vocational training, even at a European level.

The fifteen projects chosen could be roughly divided in two main classes. Some of the projects focused on developing the methods of on-the-job learning, such as instructor education, quality of apprenticeship and the co-ordination and alteration of periods of on-the-job learning and theoretical teaching. One project presented, for example, a tool for facilitating and evaluating on-the-job learning for disabled people, and another presented results of surveys on and possibilities for improving the quality of apprenticeship training. Another main class of projects focused on new groups of professionals or professions undergoing changes, such as people within the service sector, who are faced with new demands for mobility and an acquaintance with the international labour market.

Zukunft



FORUM 3: THE ON-THE-JOB LEARNING, PROMOTION OF MOBILITY AND IMPLEMENTATION OF THE EUROPASS SYSTEM

PROMOTING MOBILITY FOR PERSONS IN TRAINING THE EUROPASS TRAINING

Ms Margarida Marques

Ladies and gentlemen:

I have divided my presentation into three sections:

- A brief introduction about the European context, in order to understand the type of approach;

- A brief reference to the challenges that are posed for Europe in the matter of vocational training, integrating the two key issues that are equally the basis for this initiative by the Commission;

– the co-operation between establishments/training centres and enterprises;

– the mobility of persons in training in Europe

And lastly

- a presentation of the approach proposed by the Council Decision aimed at the promotion of the European pathway for work-linked training, including apprenticeship, and that created the EUROPASS-Training.

Introduction

The existence of a specific article in the European Union Treaty dealing with vocational training policies highlights, on one hand, the importance that vocational training has progressively assumed in Community politics and, on the other hand, it opened large opportunities for the implementation of policies and initiative at the European level.

We start with a diverse situation: diversity of systems and of policies between one Member State and another.

The diversity of systems of education and training is a source of wealth for us: it allows us to confront experiences, solutions and good practices.

And it is exactly within this logic of sharing of mutual knowledge that the policies of vocational training in Europe can contribute to the construction of a European space for knowledge and know-how.

Community programmes for vocational training have this objective: to promote transnational co-operation among the different actors and beneficiaries of the training—transnational co-operation for the development of pilot projects, the creation of networks, mobility within Europe of trainers and persons in training at all levels, whatever their ages.

The Leonardo da Vinci programme is the most important instrument for implementation of a policy of vocational training within the European Community.

The Challenges

Like the ensemble of developed countries, Europe is confronted with a certain number of challenges: the massive introduction of new technologies in the process of production of goods and services, globalisation increasing exchanges and acceleration of scientific knowledge. These transformations profoundly affect enterprises in their capacity to adapt and to restructure in an ever increasingly competitive world. Europe has no other option than to confront these challenges, and it can only hope to succeed while remaining the point of reference if it invests wholeheartedly in qualifications and skills.

The development of highly qualified human resources with regard to new issues (new technologies, innovation and its transfer, new production methods, new organisation of work, etc.) takes place through greater co-operation between the world of education and training and that of enterprises, notably SMEs. For the benefit of the two groups of partners concerned, this co-operation contributes to a better social and professional insertion of young people, notably by contributing to giving them their first experience in the work world.

In the context of the establishment of the interior market, and more generally of that of construction of the Union, and therefore a space without borders, the mobility or persons in training takes on a more and more important dimension of the affirmation of European citizenship as well as a tool for intercultural and social integration. With regard to the development of work-linked training in Europe, and notably of apprenticeship, one must note that all the same, this mobility can only truly achieve its full development if, as strongly emphasised in the Commission's Green Paper "Obstacles to transnational mobility of persons in training" (COM(96)462 final) and the "High-Level Group Report on the Free Circulation of Persons" presided by Madame S. Veil, a positive action is implemented at the Community level both for supporting development on the basis of general and common principles of quality and to eliminate, within the respect of the Member States' own competencies, the obstacles that are still present.

The debates about the above-mentioned Commission Green Paper, as well as the experienced acquired through transnational exchange programmes and placements in the domain of education and vocational training, notably Leonardo da Vinci and Socrates, show that individual aid for mobility is not sufficient. A major Community policy initiative is necessary at both the incentive and legal levels.

That is the sense of the Council Decision of last December, aiming to promote European pathways for work-linked training, including apprenticeship.

Experience acquired both in earlier Community action programmes (in particular, the Petra programme for initial training of young people and their insertion into working life and Comett, which concerned transnational stages in industry for students within the framework of a co-operation between universities and enterprises) as well as in Socrates (Erasmus Phase) and Leonardo da Vinci obviously demonstrate:

- that on the one hand, a strong demand in fact exists for such placement of young people in training: it is thus that for the three years since the launching of Leonardo da Vinci, the Community has helped to support mobility for nearly 100,000 young people in training (all categories combined);

- that on the other hand, the nature of these placements in another Member State varied greatly, as underlined in the interim report on the implementation of the Leonardo da Vinci programme (COM/97/0399/final): simple stages for work environment awareness, a longer structured period of training in an enterprise or a training centre in another, etc. In addition, in a large number of cases, the fact that this training period in another country was not integrated into the training followed by the young people objectively limited the interest and the range of this mobility;

- and that a large number of young people capable of fully benefiting from such periods of training in other countries participating in the Programme come up against difficulties of an administrative or regulatory order due, very largely, to the fact that these young people, given their status in the country where they are following their training, cannot benefit from Community programmes relative to the freedom of circulation of workers or of the visiting rights of students.

The Council Decision Aimed at Promoting the European Pathway for Work-Linked Training, Including Apprenticeship

The reason for this initiative:

- to encourage mobility

- to develop work-linked training and apprenticeship

This decision aimed at the promotion of European Pathways for work-linked training, including apprenticeship, wishes to encourage the mobility of persons in training in Europe, whatever their age, but it wishes as well to bring together schools and/or training centres in enterprises throughout all of Europe. Schools and enterprises are complementary spaces for acquisition of knowledge and skills (therefore: to develop work-linked training and apprenticeship.

This Decision is not going to create a new European "Programme;" it establishes an "approach policy" that should be followed by all persons in work-linked training, including apprenticeship, who have the opportunity to effect one or several training periods – the European Pathway – in a Member State other than that where the person is pursuing his training, whatever the framework in which this mobility will occur (Community programmes and initiatives, bilateral/multilateral co-operation among Member States, among others).

The objective of this Decision, based on Article 127 of the Treaty, is therefore double:

- to define the content and the general and common principles of quality underlying the European Pathways, that is to say, to the training periods in another Member State within the framework of work-linked training, when these periods of training are integrated into training followed in the Member State of origin;
- to make these European Pathways more transparent and more highly visible by means of a certificate, the EUROPASS-Training, which adds value to the training experience and/or the work acquired by the beneficiaries in another Member State.

Taking into account the differences that exist among the systems and programmes for work-linked training, including apprenticeship, in the Member States, and in order to construct a common conceptual framework, some definitions have been introduced. I offer the following definitions:

- "European pathway": when agreement has been reached about the use of the EUROPASS-Training, any period of vocational training effected by a person in a Member State (receiving Member State) other than that where the person participates in work-linked training (Member State of origin) and within the framework of said training;
- "person in work-linked training": all persons, regardless of age, participating in vocational training, regardless of level and including higher education, leading to a diploma or other qualification recognised by the competent authority of a Member State of origin, according to legislation, procedures or practices that are in force there and including structured training periods, alternating in enterprises, and, where appropriate, in an establishment, centre or other place for training and this, regardless of the status of the person benefiting (under a work contract, an apprenticeship contract, scholar or student);
- "EUROPASS-Training": Community information document establishing that the bearer has finished one or several periods of work-linked training, including apprenticeship, in another Member State under conditions defined by the present decision.

Common principles of quality

- Each European Pathway is an integral part of training followed in the Member State of origin, according to the legislation, procedures or practices that are applicable there;
- The organism responsible for the organisation of training in the Member State of origin and the welcoming partner agree about the framework of partnership about the contents, objectives, length and follow-up modalities of the European Pathway;

- The European Pathway is followed and supervised by a tutor.

To give visibility to these European Pathways, the EUROPASS-Training has been created. The EUROPASS-Training is a "Community information document" that states that a European Pathway has been effected.

The implementation of this decision will be in close co-operation with the Member States. The Member States have been invited to name an interlocutor who will assure the implementation of the Decision at a national level, in close co-operation with the social partners, as well as, if appropriate, with representative organisms from work-linked training.

The EUROPASS-Training will be available for delivery starting on 1 January 2000, with 1999 being a year for disclosure and preparation for its implementation.

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Ms Margarida Marques, Ms Carita Blomqvist and
Mr Luis Miguel Fernándes

MOBILITY AS A LEARNING PROCESS

Mr Søren Kristensen

Introduction

"Mobility" or even "transnational mobility" is a frequently used word on the European scene. However, it is a difficult concept to come to terms with, as it may mean different things in different contexts. Some clarification is needed. When we talk about transnational mobility, broadly speaking we can divide it into to 3 different purposes. There is mobility for recreational purposes (also known as tourism), mobility for employment purposes (labour market mobility), and finally mobility that is undertaken for a pedagogical reason – mobility as a didactic tool or as a learning process. This is the type of mobility promoted through the European programmes and also the one that forms the subject matter for this intervention.

The use of mobility for a pedagogical purpose – i.e. as a means of acquiring certain skills or aptitudes in vocational education and training (VET) is not a new one. In medieval times– i.e. before the introduction of print, mass literacy (or even the internet) – knowledge could only be transferred through personal contact, and any new technological developments could only be disseminated through word of mouth or by watching it on site. Knowledge had to be sought out in order to learn about it, and mobility was therefore the only way to ensure the spread of technological innovation. This fact was recognised by contemporary experts and in many of the craft guilds it was only possible to set up as a master craftsman in a field if one had travelled for a certain period of time as a journeyman, exercising the craft one had trained in. The idea was to send these craftsmen out and learn new technologies, so that they could later return and use these for the good of the society they originated from. One can say that transnational mobility was institutionalised here in the training system as an integral part of it. As new forms of technology transmission were introduced, however, this form of mobility gradually died out, even though vestiges of it remained in Northern Europe right up till WW I.

Globalisation, new technologies and transversal skills

It is, of course, still possible to go abroad and learn something new concerning one's chosen trade, but it is rarely the most cost-effective way of relaying technology. A young apprentice car mechanic, for instance, may certainly acquire new technological skills and insights during a placement period in another country, but it is by no means the only, the easiest or the cheapest way of learning these today. There are many other methods – e.g. via multimedia learning tools. When transnational mobility was reintroduced as a didactic concept in VET in the late 80s and early 90s, it was therefore not primarily as a vehicle for technology transfer. The need for mobility in that context no longer exists. The underlying rationale hangs together with developments on the labour market that necessitate new and different sets of qualifications; qualifications for which it is if not the only, then perhaps the most effective method of acquisition. These developments and their concomitant skills requirements can – again in broad terms – be grouped under two headings.

The first of these headings is concerned with the advent of globalisation. Globalisation denotes the process whereby the economies of the world gradually open up more and more to one another, and where enterprises as a consequence over a period of time lose their national foothold and engage in cross-border activities, through increased import/export relations, relocations, mergers, acquisitions and joint-ventures. The second of these deals with the rapid turnover in technology, which can render concrete, technical skills obsolete almost overnight (think of what happened to typists or typesetters), and makes education and training a lifelong process rather than a one off investment undertaken at the beginning of one's career. Both of these developments carry with them a set of specific skills requirements.

Being able to handle a work situation which is undergoing a process of globalisation requires what has been termed "international qualifications": foreign language skills in order to be able to communicate on a verbal level with colleagues and business partners from abroad, and intercultural competence at a deeper level in order to interact constructively with them despite differences in outlook and value systems. The changes affected by the introduction of new technology mean that more emphasis is placed on the so called transversal skills: e.g. adaptability, self-reliance, quality-consciousness, independence, creativity, the ability to deal with insecurity, the ability to unlearn old things and learn new etc. This is a development that is noticeable in all VET systems, and one which has spawned a huge debate in pedagogical circles that is still raging. How does one acquire these "transversal" (or "key") skills? They are difficult – if not to say impossible - to teach in a normal classroom situation. They require new teaching methods; a new pedagogical approach. Basically they cannot be taught – but a learning space can be constructed where they can be acquired. A transnational experience in the shape of participation in a mobility project has proven a very efficient tool to further the acquisition of foreign language skills and intercultural competence; a fact that can hardly be disputed. It has also, however (and a number of extensive evaluations at both national and regional level across Europe testify to this) turned out to be fostering precisely those elusive transversal skills by creating a "didactic space" that is favourable to their acquisition. Participants in transnational placement projects (in particular for long-term projects) generally return more self-reliant, tolerant, flexible and enterprising.

Organizing the projects

A word about the way in which these mobility projects are organised. Basically, they may take place either as an integral part of the curriculum of VET-courses, or be organised immediately after the completion of the course ("exchanges for young workers"). Due to the differences between the VET-systems in Europe, a mobility project that is to take place within the curriculum of a formal course is in most cases not possible in so far as the theoretical – school-based – elements of the course are concerned. Therefore, the majority mobility projects (if not to say practically all) are organised as work placements in enterprises. When we talk about transnational mobility in a VET context, we are therefore nearly always talking about placements.

This new use of mobility as a didactic tool may be a recent phenomenon heralded at European level by the PETRA II-programme in 1992, but it already concerns a large number of people. In Leonardo I (1995-99), over 150.000 apprentices and workers were shifted across borders as participants in this type of mobility, and nearly half the budget of the new Leonardo II-programme is allocated to mobility. In addition to this, many Member States have their own national programmes which promote transnational placements. Being Danish, I cannot help mentioning the Danish PIU-programme, which allows all apprentices in initial vocational training who so wish to do all or part of their mandatory placement periods abroad. Under this programme, annually some 1000 apprentices are sent out for periods of work placement in enterprises in other European countries lasting on average over 8 months.

How can the quality of the placement projects be ensured?

Despite the fact that so much importance is attached to this activity, at least when measured in terms of the funds ploughed into it, it is somewhat amazing to see that the main success criteria still seems to be the "head count"; i.e. how many that were sent out, and how many completed the stay "successfully" (i.e which did not return prematurely) . Practically all studies undertaken on European and national level to underpin transnational mobility of the type we are discussing here have as their focal points technical aspects: Certification and legal and administrative barriers to mobility. The actual work of assuring the quality of the learning outcome has hardly been broached. But when we talk about mobility as a learning process, surely the removal of technical obstacles – important as it might be - cannot be the main thing? Since seemingly everyone is agreed that the objective of the activities is the acquisition of certain qualifications, then this must be the yardstick to measure success or failure. In other words: if the participants don't learn anything, why bother to send them out at all?

As I see it, a vital point in the discussion of mobility in the future must therefore be the issue of quality assurance of transnational placement projects in terms of the learning contents. How can we ensure that the young people we send out on placements also acquire the skills and competencies that we wish them to acquire? The issue can be approached from two angles, of which the first is concerned with the necessary preconditions for a successful learning experience in the participant himself – what we might for want of a better term call "personal quality assurance".

You cannot just take any young person and send him or her on, for example, a 'three months' placement in another country. With some it might work, but for most people it should be ensured that they are adequately motivated, selected and prepared. And by way of preparation more than a short language course is needed. Preparation covers 5 aspects, of which linguistic preparation is only one. Other aspects that must be covered are cultural, vocational, practical (e.g. social security arrangements etc.) and psychological preparation. Psychological preparation means some kind of preparation for the effect of a sudden immersion in another culture and mentality can do to you – usually known as the "culture chock" – and the accompanying effects in terms of loneliness, isolation etc.

This preparation, however, requires special expertise that is as yet not sufficiently developed in this area, and there is also much work to be done on the elaboration of material for use in the process.

The second issue is concerned with the creation of the actual learning environment – the didactic space – where the learning process has to unfold. It is important to understand that we cannot control this process in any detail, and that it is not even desirable that we should. A vital ingredient in the process is that the participant gets this feeling of being left to his own devices, of having to fend for himself. This is where he develops some important personal competencies, like independence, self-reliance, adaptability etc. Some have compared this to a "free fall", using a term from parachuting, but it has to be a controlled free fall, where we can be fairly sure that the participant will reach the ground again safely. There are certain factors that we can manipulate in order to optimise the possibility of a positive outcome in terms of learning.

In my view, there are two (possibly three) overriding factors that determine the outcome of the learning process in a transnational placement project. One is, of course, time. Few can doubt that in general, the longer you stay, the more you learn; at least in terms of linguistic and intercultural competence. If the mobility project is carried out inside the framework of the formal VET-systems, however, most Member States still have difficulties in sending out apprentices for more than a month, so obviously this factor is subject to some limitations. Another factor – which I would be a little wary to include - is age, as some psychologists maintain that the capacity to learn and the nature of learning changes with age. The most important factor, however, is the degree of proximity to the mentality and culture of the host country in the broadest possible sense.

The commitment of all parties to the learning process

What we as organisers or curriculum developers must concentrate on in this context is the working environment of the trainee and his relation with the host company. My impression is that many placement projects fail to accomplish their objectives because the participants are not properly integrated in the work processes of the host company – they remain standing in the periphery looking over the shoulders of busy colleagues. This limited interaction means a small learning outcome, both on a professional (vocational) and on a personal level. Sometimes this is simply due to sloppy work by the organisers or an unusually hectic period at the host company. In most cases, however, this limited or even non-existent participation in the work processes can be due to the unavailability of adequate information from the organisers to the host company concerning the training objectives of the placement, and skills level of the participant. If companies have no idea of what is expected of them and what they in turn can expect from the trainee then the result is often this lack of participation and integration that hinders the learning process.

This is not as easy as it sounds. You cannot just take the descriptions and terms from a VET system in one country and translate them into another language and expect them to be understood. They have their roots in different traditions and need a lot of implicit knowledge to be decoded. In order to do this, we must try and establish some kind of transparency between the elements of the various systems that makes such descriptions understandable to the recipients. Some work has already been done in this area in connection with placement projects, but very often the issue is neglected in favour of more immediate practical concerns (transport, housing, insurance matters etc.)

In this ongoing relation with the host company, there are indeed a number of procedures that can be greatly professionalised, for instance procedures on how to follow up and measure progress during the placement; an issue that is far too often forgotten. I recently saw a French-led Leonardo-project where the whole concept of placements abroad had been reworked using tools from industrial quality assurance methods (ISO 9002, EFQM). The result was extremely interesting and thought-provoking, and one which could serve as a model for many placement organisers.

A final issue to be taken on board as a logical consequence of the above points is the issue of certification. If we do implement transnational placement projects in order to promote the acquisition of certain qualifications, we should also be able to certify them – not only the formal ones, but also those less tangible ones (intercultural competence, personal competencies).

The problem of an undefined trainee status

The whole area of the learning process in transnational placements is a large one, and time and space is limited. However, should you after my intervention sit back with the feeling that I have raised more questions than I have answered, you are right. Work in this field is in progress, but there are still many aspects that are by no means sufficiently elucidated. I would like to finish off, however, by pointing out to you that this is also the case when it comes to the more formal framework of the placements. As a student, you can travel all over the EU with a special status which confers to you certain rights notably in connection with social security. This is not the case for trainees in VET participating in transnational placement projects, whose status is in many cases uncertain, giving rise to numerous legal and administrative problems. At least this is an issue that has been acknowledged as a problem at European level, and whose fate now lies in the hands of the politicians – and not the practitioners.

EMPLOYERS' PERSPECTIVES TO EUROPEAN PATHWAYS IN WORK-LINKED TRAINING

Mr Nicolas Gibert-Morin

Introduction

First of all, I would like to thank the Finnish Chairman as well as the organisers of this conference. Not only have they prepared a first-rate conference, both from the standpoint of content and organisation, but they have done it with enormous hospitality, which we have all appreciated.

I would also like to thank the Chairman for having invited UNICE to participate in this conference and to have the chance to express myself on a topic that is particularly dear to enterprises: work-linked training, including apprenticeship. UNICE is a European organisation that brings together, at the inter-professional level, national federations of employers and industry involving thirty European countries. On a European level, it represents the interests of enterprises to European institutions in order to reinforce European Union competitiveness in the face of our principal business partners with the goal of promoting employment growth.

I shall not dwell on the context in which enterprises evolve, a context in constant Evolution that has already been commented upon several times during the course of this conference. It seems important to me to underline the pivotal, even historical moment that we are living through and that will influence not only our generation, but also generations to come. The 21st century will be marked by the introduction of the single currency within the European Monetary Union. Eleven European countries will share the same currency, thus allowing Europe to affirm itself not only as an economic power, but as a monetary one, as well, in the same capacity as Japan or the United States. The single currency, above and beyond the economic and financial issues, will embody nearly 10 years of European integration and will be the cement among citizens of the European Union.

The 21st century will also be marked by the opening of the European Union to countries from Eastern Europe, mainly countries from the previous Communist block. The Iron Curtain fell 10 years ago now. The opening to the East will continue to have serious consequences in terms of:

- financing within the framework of the Agenda 2000

- changes in the economic and geopolitical balance in Europe.

These two major achievements will be accompanied by profound changes in the economy and in society provoked by globalisation of the economy, technological progress and the arrival of the information society, coupled with the aging of the population. Europe is also entering the Third Millennium with 10% of its population unemployed and with its social protection systems on the brink of implosion.

The ensemble of these challenges can only be met either by creation of new wealth or by expansion of employment, itself dependent on the competitiveness of European enterprises. Enterprise competitiveness depends upon a large number of factors that UNICE has described in its recent reports on benchmarking. One of these elements concerns the existence of highly qualified workers, to meet the needs of enterprises. With this affirmation, one says everything or nothing. The means to attain such an objective remain to be defined. The means are at the same time different and complementary. I shall not speak to that, but instead shall concentrate on the contribution of work-linked training, along with putting in place the Europass to meet this objective. The theme of this forum is at the crux of two different problems: the promotion of mobility of people in training and the encouragement of life-long learning. Two different issues certainly, but which are mutually reinforcing, a little like a winning formula. I shall develop two aspects: firstly, the principles that should govern work-linked training, including apprenticeship, and secondly, the stakes associated with establishing the Europass.

The principles of work-linked training

The first principle is that of diversity. Mr van Rens showed us the enormous diversity in national situations in the matter of work-related training, reflecting the differences in institutional structures of the Member States, as well as the different economic and social contexts. UNICE considers therefore that it is primordial to respect the responsibility of each Member State in carrying out its policies in the matter. However, UNICE considers that the exchange of experiences and good practices is a useful exercise. We saw yesterday how initiatives taken in one country have been picked up in another country, while adapting them to the national context.

Second principle: take into account the needs of enterprises and of the work world. UNICE is pleased that this element has been emphasised during this symposium. The enterprise is the space for training where the person in training will not only put into practice the theoretical and technical knowledge acquired in the formal education system, but will also acquire skills (of an informal type) linked to the knowledge of the work process, to work attitudes and other knowledge specifically liked to the post. In this capacity, I would like to say that UNICE does not share the analysis of Mr Dibelius, according to which enterprises would have a responsibility in the reclassification of persons who have completed their educations without qualifications. That is a responsibility of governments. Taking into consideration the central role of enterprises, it is essential to create bridges between the world of the enterprise and the world of education and training. Enterprises should participate in the elaboration as well as the implementation of policies for work-linked training, including apprenticeship, that is to say, to define objectives, instruments, curricula, etc. These links allow people in training to be helped to acquire the qualifications that will increase their chances of finding employment and to reduce the competence gap and the lack of workers in certain activity sectors.

A final principle is evolution in policies of work-linked training so as to take into account new needs in the labour market and technological changes. Keeping in mind the rapidity of technological change, and of the necessity to update one's skills, and the aging of the Union population, it is important to adapt policies of work-linked training within the framework of life-long learning. Apprenticeship, for example, is criticised and consequently, neglected because of the fact that it is traditionally limited to a period before starting a work career and limited to certain traditional trades. These barriers must come down and changes must be made in policies of continuous training in order to meet new needs, which numerous countries have already done.

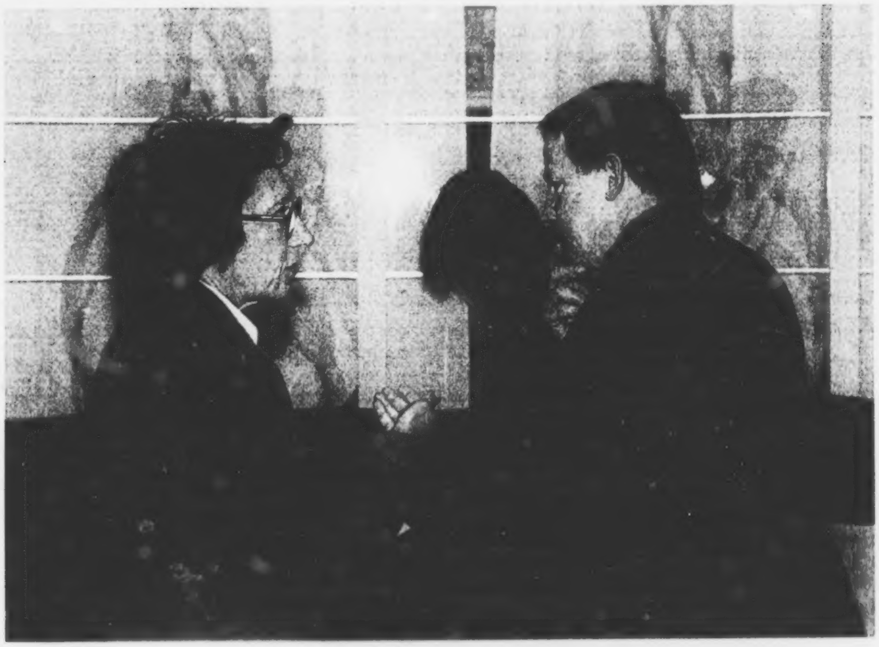
Conclusions

Within this framework, the EUROPASS is a simple and flexible tool that can make an important contribution. It will reinforce the mobility of people in training, with the possibility of acquiring a series of social or intercultural skills, including apprenticeship in a foreign language, the primordial skill in the open and interactive world that we know today. The EUROPASS will reinforce the dimension of training all through life because it is open to any person in training, without an age limit. It could be used by adults in retraining or in continuing education, for example. It will contribute to meeting the needs of enterprises for highly qualified personnel, possessing up-to-date skills. It will reinforce individual's employability and adaptability in the work market and will also augment their chances of finding a job after a training period. It will promote the creation of a European space for education and training, it will reinforce the sentiment of cohesion and of European citizenship, notably with the opening to candidate countries.

UNICE is participating in the preparation of the implementation of the Europass that will be launched in a few weeks. Certain problems remain, notably regarding the translation of the document. But soon, dozens of thousands of people in training will be using this tool, a training passport and also a passport for a certain idea of Europe.

Mr Nicolas Gibert-Morin

Ms Cândida Soares and Mr Juha Mäntyvaara



The Finnish Presidency of the EU
EUROPE
into the New Millennium

Mr Søren Kristensen, Mr Mika Eskola, Mr Reijo Raivola and
Ms Margarida Marques

THE EUROPASS - A SHORT STEP ON THE WAY TOWARDS THE EUROPEAN WORKERS MOBILITY

Mr Luis Miguel Fernández

Introduction.

My presentation is going to be oriented to cover three different aspects of the EUROPASS system:

1. The EUROPASS system itself.

2. The participation of the social partners, and specifically the participation we think that the employees organisations should develop within the EUROPASS system implementation process, both, at the European and national levels.

3. And, the role to be played by the EUROPASS into the framework of the European Union construction, of course, from a social point of view.

There is not too much time to speak, for this reason I prefer to underline the main items of the three aspects, to allow a longer discussion.

The EUROPASS system.

The EUROPASS is a logical development from the Leonardo Da Vinci Program, trying to solve the problems related with the mobility experiences of young people involved in abroad vocational training processes.

We think that the improvement on the mobility procedures due to the EUROPASS system implementation, will allow a more extended use of the abroad training in practices processes.

But the EUROPASS is not only a Leonardo development, it is also one of the first initiatives developed by the Member States governments, together with the European Commission, in the field of the vocational education and training co-ordination. The EUROPASS system is the first step looking for establish a relative link between the different European vocational education and training systems.

For this reason, the EUROPASS system has a meaning in the way towards the promotion of a common language within the vocational education and training area: it is a partial, and clearly not sufficient answer, to the need for an European common reference.

The EUROPASS has two main working fields: one related with the mobility in vocational education and training through the European countries, and the other related with the on-the-job learning itself. Both are quite enough relevant themselves, and both need to be developed more deeply than the actual EUROPASS regulation. We think it is needed a more structured operating framework than the simply requirement of an agreement between both countries involved to allow the individual EUROPASS action.

The Trade Unions participation.

Regarding the trade Unions participation within the EUROPASS system, we think that, in general, the participation of social partners on the EUROPASS definition, and future development, has to be established at both: national and European levels.

At the European level, the Social Partners we already have a small participation, we are present only as European organisation into the EUROPASS experts working group, therefore our role is very constricted.

At the national level, the Council Decision is very clear asking to every Member State for a Social Partners "close co-operation" with. This participation should be established within the EUROPASS national bodies, but this participation, in general, has not been developed yet.

For this reason we are asking to the European Commission for a formal participation procedure covering both levels.

But the participation is not only related with the institutional aspects. We think that, as Employees Organisation, we have also a role to play in the direct application aspects.

In this direct application area, based in our knowledge and our presence within the companies where the people is going to develop their practices, the national Trade Unions should play a very interesting role in the following items:

- In the companies selection procedure (we could suggest which company is able to accept some people).
- In the people reception, giving them information about the practices development framework and the labour conditions and rights.
- In the support to the people in practices, during their stay in the company.
- And in the monitoring of the practices themselves, looking at the right development of the practices, the training requirements compliance, the agreed conditions fulfilment, etc.

In other aspect, Trade Unions are also able to participate in the co-ordination between the respective countries to allow a better agreement between them in terms of working conditions and personal guaranties, and to promote a more homogeneous and positive development of the EUROPASS procedures across the Members States. This participation should be developed by the national Trade Unions in close co-ordination with the ETUC organisation.

The role of the EUROPASS towards the European social construction.

To close my presentation, I am going to speak briefly about the future development of the EUROPASS system.

In our opinion, and looking at the European Social construction, the EUROPASS system needs to go further than the original design which is already defined related with the students transnational interchanges. Based in its own definition, the EUROPASS is able to be used to develop two different roles:

- To be an instrument of information, or, if possible, of co-ordination between the national vocational education and training systems.

- And, based in this information and/or co-ordination, to improve the transparency inside the European labour market, and, as a consequence of that, to allow an easier workers mobility across all the European Union countries.

Both questions are considered as fundamentals under our point of view, and, in general, under a social point of view (which is the point of view less developed in the European construction).

Specifically, the workers mobility right across all the Union countries is a basic right, not implemented yet, but fundamental to build a real Social Union.

Two of the keys to develop this right are to reach a good transparency level between national vocational qualifications (higher than the proposed at the "European Forum on the transparency of qualifications") and to promote a way to allow a convergent development of vocational education and training systems in every country. In both cases the EUROPASS could play a quite relevant role.

Therefore, the future plans concerning EUROPASS system have to take in account the need of a deeper interaction between the different vocational education and training systems. In this way it is needed, also, a more structured EUROPASS operating framework, as I already told.

We know that the complete agreement between all the European vocational education and training systems is not possible yet, but we think is basic to establish a strategy development, from every national administration, to facilitate a higher level of uniformity between learning systems.

PRINTING INDUSTRY EXPERIENCE

Mr Lauri Norvio

Federation of the Printing Industry in Finland

The Federation was founded in 1900 and is Finland's oldest employer association. The Federation membership, which originally consisted only of book printers and bookbinders, has expanded to comprehend news, periodical and local paper publishers, book publishers and agencies.

Communications industry service firms, local radio stations and cable television companies also belong to the Federation. In accordance with regulations the Federation has made preparations to serve an even broader range of companies operating in communications.

EGIN (European Graphic Media Industry Network)

EGIN is the European Graphic Media Industry Network. EGIN was established in the beginning of 1991 by employer and employee associations. Its members include research facilities, universities, vocational colleges and schools as well as centres for continuing education.

There are 32 EGIN members, from 12 countries. Over 80 participants from these countries have attended the annual conferences held. Representatives from both employer and employee associations, and from seven countries, sit on the board.

Printing industry vocational qualification system

Basic education in the printing industry, in accordance with a collective labour agreement:

Following a 2-year printing industry education at a vocational school or a 2-year apprenticeship, a profession is granted, at the end of which a basic certification is taken.

After taking a basic certification, a 1-year apprenticeship is performed as additional training, during which preparations are made towards receiving vocational qualification. Only after the student has taken his vocational qualification can he be considered a professional.

Basic and vocational qualifications in printing surface preparation, printing and finishing are granted.

By receiving a competence-based qualification, the professional demonstrates that he possesses the basic knowledge and manual skills of his own profession necessary in the correct execution of normal tasks, as seen in his productivity and the quality of the products he manufactures. A student, having completed the first term of his vocational training or apprenticeship and the final examination for basic certification, is eligible for vocational qualification following the satisfactory completion of an approximately year long supplementary training period and on-the-job training period, and passing a competence-based examination.

A person with competence-base qualification is qualified for the profession in that field of orientation which he has certified. Receipt of vocational qualification and its pertinent field of orientation are noted in the certificate of vocational skills of the individual in question and entitles him to use the related professional title. Vocational qualification titles in the printing industry are: printing surface manufacturer, printer, bookbinder and finishing machine operator.

Specialist competence-based qualification can be received by a person, whose professional knowledge and skills are clearly exceptional and who possesses an extremely broad range of experience in the manufacture of highly demanding products, the development of manufacturing method productivity and the skill to demonstrate to their colleagues how products can be made at an exceptionally high level of quality or how each stage of operation can be performed in an effective, cost-saving manner. The holder of specialised vocational qualification should possess a high level and at least 3-5 years of work experience and additional knowledge gained through in-depth, supplementary training as well as the successful completion of a specialist competence-based examination.

Polytechnics in the field provide certification for engineers and degrees in Media Technology, while universities prepare personnel for design and management positions.

BenchComp

The Federation of the Printing Industry in Finland operates in partnership with the two-year BenchComp project co-ordinated by Intergrafin, in which book printer work descriptions and levels of expertise in different countries are compared. In addition to Finland, a total of 10 countries are involved in the European Commission-funded Leonardo project: Austria, Greece, Hungary, Italy, Holland, Portugal, Scotland, Spain, Sweden and England.

The project has been realised using the English National Vocational Qualification Level 3 (NVQ3) as a standard, i.e. a type of English vocational qualification by which each country compares the work descriptions of its own vocational community. The intention of this comparison is that each country have an idea of the level of expertise possessed by their book printers compared to that of other countries, which, if discrepancies are found, can be used in improving their competitiveness.

Printers were the point of focus for the first year of the project and that autumn, in the initial project phase, 13 printers (one printer each from 13 companies) possessing vocational qualification, as well as one representative of management were interviewed in order to obtain background information. In 1999 the target group was printing surface manufacturers and finishers. An attempt to deepen the information obtained from the interviews conducted was made by posing additional questions to the companies in question, in order to determine the field's best practises.

The final result of the project, which was concluded at the end of 1999, was a description of each participant's vocational education system, the evaluation of these systems using various gauges and recommendations for each country's industry associations and educational organisations.

FORUM 3

THE EUROPASS SYSTEM IN GERMANY - THE EUROPASS FROM 2000: TAKE-OFF FOR A EUROPEAN CERTIFICATE SYSTEM

Mr Peter Thiele

Introduction

Mobility across state borders especially relating to universities but also to vocational training has continually increased for several years.

European integration, the European single market and the developing single labour market, especially in border regions, together with a growing popularity of European training exchange programmes give a clear indication that young people and the adult labour force will increasingly use the European Union as a place of learning. This is especially true for Germany with 9 neighbouring countries and its central position as a bridge between Western and Eastern Europe.

We must account for this development by an improved international opening of national training systems, by stronger involvement of professional exchange phases in other states and by greater transparency of training routes and qualifications in our countries.

The need for the EUROPASS

For the further development of the European co-operation in vocational training, the new EU-programme LEONARDO II, which has been passed under the new German EU-Presidency, plays an important role as it attaches special significance to the promotion of mobility from the year 2000. The part of the programme's budget intended for mobility has been increased by 30%. Many member states, including Germany, will in addition extend their national exchange programmes.

In this context, political initiatives such as the decision of the Council in favour of the EUROPASS to acknowledge foreign qualifications in vocational training are of significance as the value of foreign qualifications in the end depends on their usability and assessability in the training and employment market.

A look at the history of the EU-co-operation clearly shows the necessity of a certificate system such as the EUROPASS in Europe: In the 20 years of European co-operation in the exchange of training, foreign qualifications have only been acknowledged insufficiently in varying forms of format, language and content. At the start of the Nineties, the member states and the Commission carried out studies with the aim to improve the cross-border transparency of qualifications in training and in the labour market. It was at this time that standardized certificates for the whole of Europe were seen as a possible information medium but the idea was not followed up.

In the Commission's Green Book discussion about obstacles to training mobility, Germany and other states supported the introduction of "an EU-certificate of uniform design and framework for foreign qualifications for training and continued professional education in the languages of the host country and the country of origin." The Commission then took the initiative and presented a decision of the Council for the EU-uniform EUROPASS, which was adopted by the Council of Ministers after rapid negotiations in December 1998.

Primary features of the EUROPASS

Let me outline the essential features of the new instrument EUROPASS:

- From the year 2000, the EUROPASS will be valid for all forms of vocational training containing a proportion of company training including those in the post-secondary sector and will be available in 11 official languages.

- The decision of the Council relating to the EUROPASS regulates the basic conditions of the certification of so-called, European vocational training segments."

- Vocational training segments will be carried out on the basis of agreements between the training partners of the country of origin and the host country and will be accompanied by an instructor.

- The training partners determine the professional content, the aims, duration and procedures of the foreign qualification and lay down these details in the EUROPASS.

- In addition, the participants, their instructors, the total duration of training and the training establishments involved will be named.

- The certificate will be issued in at least two languages, the one of the country of origin and the one of the host country.

- The certificate will be issued by the training partners responsible for the training of the participants in the EUROPASS.

- The EUROPASS will be made available free of charge from the issuing offices in the member states. The exchange measures themselves, however, must be financed through other sources, such as European/bilateral programmes or third parties.

- Utilization of the EUROPASS is voluntary. Nonetheless, there has already been great demand for the EUROPASS in Germany.

The goal: definition of terms

From our point of view, the EUROPASS makes an important contribution to increase the attractiveness of vocational training, the status of foreign qualifications in training and work and to close the gap between different systems of vocational training. We are planning to actively exploit the EUROPASS not only in connection with European exchange measures but also for bilateral programmes, which we are extending

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considerably at present.

In order to use the EUROPASS on a national level in Germany, we intend to implement a single co-ordination authority responsible for comprehensive tasks. Additionally, we have agreed with the counties, social partners and exchange organizations to establish a number of issuing offices for the EUROPASS thereby securing easy access to EUROPASS-forms for the public (schools, companies, etc.). By ascertaining information about the participants and issuing questionnaires to the training partners and participants, we will be able to evaluate the results of the EUROPASS – an important aspect for us.

At present, we are working in a team at the Commission to determine guidelines for the realisation of the EUROPASS to ensure that the application of the EUROPASS will be harmonized within Europe. One issue is the interpretation of various unclear terminologies in the EUROPASS decision. Essentially these cover the following points:

- Training component: The EUROPASS requires that a stay abroad forms part of the training according to the regulations and procedures of the member states. This will now also include any foreign qualifications which are not expressively provided for in the training regulations but which have been agreed on a voluntary basis between the participants during vocational training.

- Agreement between training establishments: The use of the EUROPASS requires an agreement between the training establishments for qualifications that have been acquired abroad. Applied literally, this means that foreign qualifications of individual candidates that are not part of a training establishment (i.e. after the actual training period or studies), cannot be granted the EUROPASS.

- Alternate vocational training: The EUROPASS can only be used by those candidates who either are already enrolled in national vocational training or entitled to enrol in dual or alternate vocational training through transnational collaboration. Applied literally, the EUROPASS can therefore not be granted for full-time professional school education without any practical component.

- Participation of member states: The EUROPASS is based on a decision of the Council, which is directly only effective for the 15 EU-states involved. Simultaneously, 29 states will take part in the LEONARDO programme through a programme such as LEONARDO II and consequently in exchange measures. We must ensure that the EUROPASS will also be accessible for these states to avoid a „two-class-system“ in the exchange process. We actively support the efforts of the Commission in this respect.

In my opinion, we must also consider to enable target groups so far excluded from the EUROPASS (especially full time students, individual applicants) to participate at the earliest opportunity.

Even though the EUROPASS follows practical vocational training as one of several aims, the exclusion of some mobile participants in education and training in Europe from its advantages can hardly be justified within the framework of European co-operation in education and of improving the transparency of qualifications.

For the EUROPASS gains its special meaning by being the first instrument providing an EU-uniform document for proof of foreign qualifications in several languages and thereby promoting the acceptance and mobility in the education and work sphere of Europe. We should actively use this huge progress for a broad group of participants.

Acknowledgement of qualifications on a voluntary basis

The application of the EUROPASS, which only sets a minimum standard, will question in the medium term if it should not be used as the basis for more detailed diplomas and certificates of qualifications.

In recent decades, the European debate about the acknowledgement and transparency of qualifications has shifted from mutual acknowledgement via compliance of vocational qualifications to concepts of improved transparency and comparability of qualifications.

The EUROPASS follows this trend. At the core of it, it is an instrument to inform about qualifications in several languages. At the same time, however, a growing number of voices can be heard in the debate about transparency and the EUROPASS, which would like to attach a higher qualitative status to instruments such as the EUROPASS (without immediately aiming at a formal, legal recognition of part qualifications abroad).

A starting point is the example of the European credit transfer system ECTS used in the university sector and the question arises if such a system could not also be adapted for the vocational training sector. ECTS was launched for the university sector by an initiative of the European Council in 1985 and aims at facilitating the acknowledgement of courses at universities abroad on a voluntary basis and according to agreements between universities.

Meanwhile, the ECTS has been firmly integrated in the programme SOKRATES I and will continue in SOKRATES II. More than 145 European universities take part in ECTS. The basis of ECTS are mutual acquaintance and trust, transparency of the study contents and the agreement of a point system for qualifications as well as a "Learning contract," negotiated and formulated by all parties.

The transfer of this system to the vocational training sector, for example by using the EUROPASS, is at present subject to political and professional controversy. For centuries, the university sector has enjoyed close international co-operation and mobility as well as similar study courses and procedures. Therefore it has always been much easier to compare and acknowledge studies. In vocational training, in contrast, international co-operation has been developed to a considerably lesser degree. In addition, we are faced with a variety of different systems and – also in relation to timings and contents - differing training courses and formats (dual, alternate, training on the job, full time school) in vocational training. In places such as

Germany, where vocational training is not divided into certified or examined segments, bilateral agreements between companies, which are already being used today, are sufficient.

From a European point of view, however, it seems advisable to test the transferability of ECTS to the sector of vocational training on a voluntary basis. The LEONARDO pilot projects and mobility measures could provide a suitable framework for this. The prerequisites for such pilot trials would be

- participation of member states with similar vocational training systems
- existence of long-established co-operation between the partners
- formation of training associations with detailed and binding training contents and procedures.

Varied LEONARDO pilot projects aiming at mutual certification of foreign qualifications exist already and show considerable success. The EUROPASS could provide a suitable basis for certification for such models.

Conclusion

Our primary concern, however, must be to help the EUROPASS in its existing form to be successful and to assert itself in Europe.

Apart from finding answers to the above-mentioned questions about the application of the EUROPASS, this will also include the active participation of the social partners, especially of companies by providing training placements in all participating countries.

In this context, additional accompanying and motivating measures seem useful to secure a balanced ratio – also on a regional level – of supply and demand of company placements, not least because of the big differences in training systems and training participation of companies in the member states.

I hope that our discussion group will lead an interesting debate about the topics outlined in this paper. Possibly we can even make the first steps in the right direction. Thank you for your attention.

FORUM 4: THE IMPACT AND QUALITY OF ON-THE-JOB LEARNING

HOW TO REDESIGN THE RELATIONS BETWEEN THE EDUCATIONAL SYSTEM AND WORKING LIFE

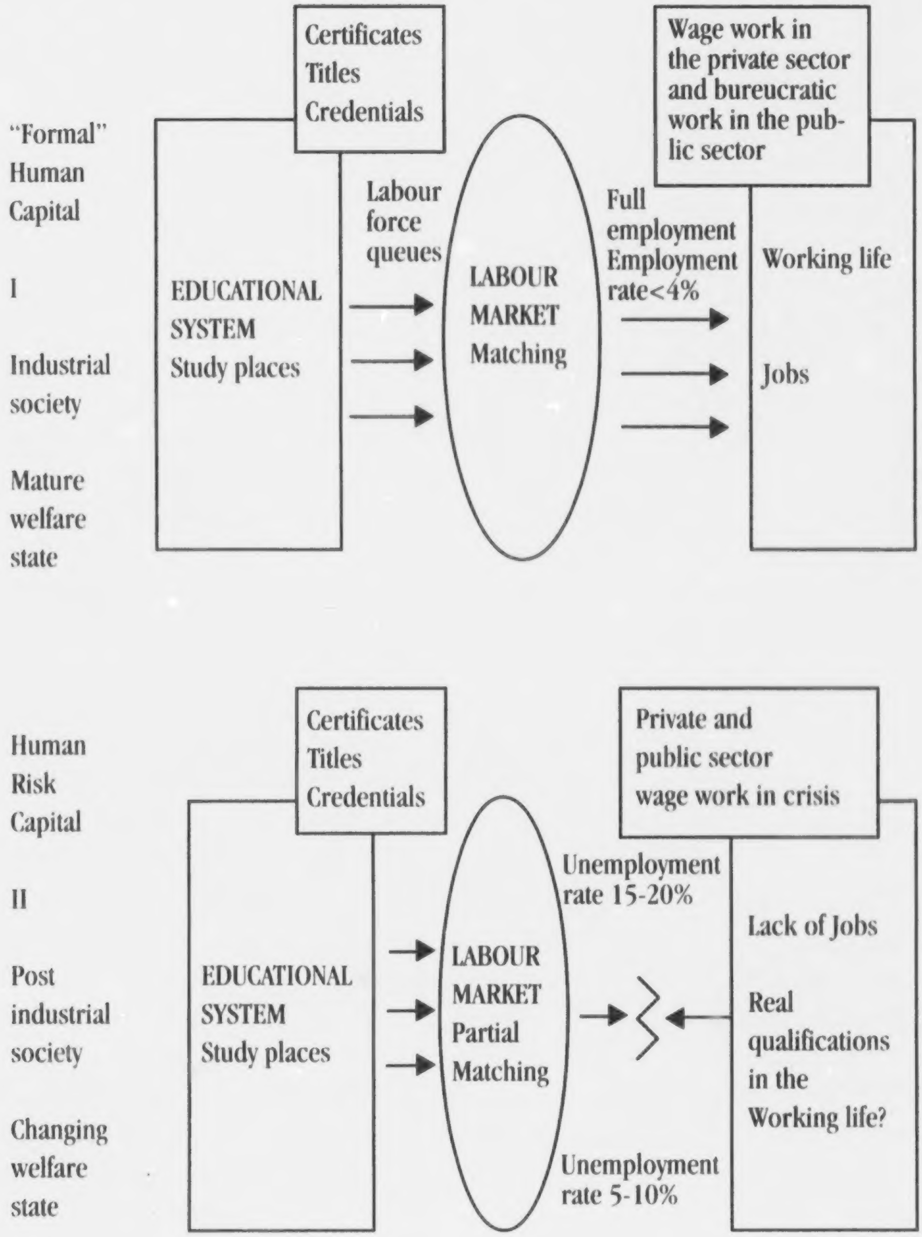
Mr Osmo Kivinen

Introduction

In the post-war social-democratic welfare states typical of the Nordic countries, all education was centralised under the authority of State administration, usually the Ministry of Education. In the spirit of all- embracing educational optimism and equality of educational opportunities prevailing in that period, occupational skills were also supposed to be forced into a form that would allow them to be learned at school. As the process of acquiring occupational skills became more school-like, the gap between working life and educational institutions widened even further. In the industrial society of the 1970's and 1980's, built on mass-production and full employment, it was possible to live in this way. But the economic recession experienced in the 1990's aggravated problems that had been caused by the separatism between education and work. There simply was no need in the labour market for the mediocre skills provided by the "new academic training occupations" conceptually constructed by the educational planners and certified on paper, Figure 1 below presents this development as two phases: the phase of the mature welfare state and industrial society (with formal human capital at its core), and the phase of the changing welfare state and post-industrial society (with human risk capital tied to the crisis of wage-paying work).

In the phase of industrial society (roughly by the end of the 1980's), relations between education and working life were irreproachable. In the Nordic welfare states and industrial societies based on wage-paying work there were plenty of study places after basic education (more than one study place for every member of the age-group). The matching of trained people with jobs was not a problem, as there was full employment (unemployment rate below 4 per cent). In practice, there were sufficient civil service posts in the public sector or jobs in the private sector available for every person able and willing to work. The increase of human capital was single-mindedly identified with enhancement of formal education and training. The leading principles were equality of educational opportunity and the human capital ideology, which assumes that investment in formal education is individually and socially worthwhile. (Kivinen & Silvennoinen 1999)

In the 1990s the situation changed dramatically. Investment even in the highest educational qualifications was becoming human risk capital from the individual's point of view as the number of vacancies fell radically (Kivinen & Ahola 1999). When formal qualifications no longer guarantee employment, the question arises:


"Formal"
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rate 15-20%
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rate 5-10%
Private and
public sector
wage work in crisis
Lack of Jobs
Real
qualifications
in the
Working life?

Figure 1. Relations between the educational system and working life

what are the real qualifications (skills) that one should have in order to succeed in working life? At the same time, people began to question the official ideology that the continuous lengthening of institutional education – increasing the number of years spent in school – was somehow the same thing as increasing human capital that could be applied in practice.

The fundamental ideology of the Nordic welfare state, egalitarianism with full employment, does not work in the new labour markets. The welfare state is not necessarily incompatible with post-industrial society, but the old ways are not appropriate for managing the new risks and new inequalities (ageing population, unstable families, and the severe trade-offs between welfare and jobs, equality, and full employment). (Esping-Andersen 1999)

Instead of the "end-of-work prophecy" or work-sharing models, a promising but not unproblematic starting point is to accept that "work creates work: less work creates less work". As Esping-Andersen points out in this context, the basic dilemma is how to sustain work incentives among low-wage workers when either welfare or crime appear more attractive, but I will not go into this aspect of the question here.

The search for a post-industrial welfare optimism requires some kind of mobility guarantee. There is a need for measures that will help to diminish labour market induced risks; the first task is to solve the problem of inadequate skills. Esping-Andersen (1999, 183) is fully convinced of the fact that "for any given individual, skills are the single best source of escape from underprivilege" and that "closing the skill gap is… an extremely effective way of catapulting people out of entrapment, of assuring good life chances".

To back his statement ("it is clear that education and training prevent entrapment"), Esping-Andersen (1999, 160, 183) refers to statistics according to which in Denmark vocational training raises the chance of exiting from unemployment by 30 per cent, and theoretical training raises the chances by 50 per cent; and furthermore, thanks to active training programmes, unskilled Swedes have a three times greater chance of moving into skilled jobs than do unskilled British workers.

When educational reforms are offered as a solution to problems of underprivilege and unemployment, it is worth remembering, for example, that the basic reasons for the economic and employment crisis experienced in Finland in the 1990's lie elsewhere than in the educational system. The fact that Finnish unemployment figures suddenly swelled to massive proportions was certainly not due to Finns having lost either their education or their skills overnight. In fact the school system, now institutionalised and isolated on its own separate island, has always been an inefficient means for producing the skills that people have needed in their work. But the problems did not come to a head in the conditions of a mature welfare state and an industrial society based on wage-paying work, where everyone who completed their education and most others too found a place in working life. As there were jobs available and sufficient incentives – people learned the skills needed for the jobs. (Kivinen & Silvennoinen 2000)

If marginalisation and employment problems are seen as a skill gap (and skill as an individual property produced by education), there is a danger that people may begin to see the crises of a work-based society and welfare regime as deriving in the last resort from the individual's inadequacy.

The problems of the skill gap

According to Esping-Andersen (1999) the most central problems and risks faced by an individual in the labour market derive from inadequate skills. Thus "closing the skill gap is [..] an extremely effective way of catapulting people out of entrapment, of assuring good life chances" (p. 183). Unfortunately Esping-Andersen's proposed solution, in which the skill gap is to be eliminated through education, is not without its problems either.

First of all, the development of skills and education are by no means one and the same thing. It is not at all to be taken for granted that the skills learned in an institution are the skills really needed for the occupation "corresponding" to the qualifications. It is also unclear to what extent people are placed in jobs on the basis of their real skills. The relationship between school learning and vocational skill is disputable (Psacharopoulos 1997; Kivinen, Silvennoinen & Puustelli 1999). Both for progress in the educational system and for placement in the labour market the secondary benefits of education (credentials) are more important then the primary benefits (contents of teaching). The functioning of educational institutions is defined in terms of winning grades and certificates rather than by assimilation of the content of teaching. The contents learned are in this point of view useless unless they are seen in the form of grades and certificates, while on the other hand grades and qualifications are useful regardless of what has been learned in order to gain them.

Secondly, the idea of overcoming the skill gap problem by means of education involves the unfounded belief that education is a kind of miracle cure that will improve employment chances. It is believed that the empirical relation existing between education and employment at one point of time (t1) will still apply at another point of time (t2). Yet this relation cannot be shown to exist, because between times t1 and t2 the situation and the players change substantially. As people acquire more educational competence in the hope of finding employment, at the same time many of their competitors also educate themselves, and if all those interested in a certain job acquire the same amount of education, none of them gains the competitive edge they were striving to achieve. In this sense, the labour market value of education is based on the potential relative advantage to be gained by it.

On the other hand, statistics show that the individual's risk of becoming unemployed is the smaller the higher the level of his or her education. The highest proportion of unemployed is found among those who have completed only their basic education, and have no vocational training, whereas the highly educated account for a smaller proportion of unemployed than other groups. But false generalisation of this statistical information feeds the belief that education reduces the amount of unemployment. In somewhat black-and-white terms, the fact is that if the whole population is highly educated, the acquisition of a university education no longer protects the individual against unemployment as before, and to gain a relative competitive further qualifications are needed. (Kivinen & Silvennoinen 2000)

The unemployment rate of the active population at any one time is not so much dependent on the level of formal education but on the total number of vacancies and employment opportunities at that time. In addition, a small amount of short-term so-called frictional unemployment can be explained by the problem of matching graduates with jobs in the desired way, when specialists have to be provided for jobs requiring special training. On the other hand, the number of wage-paying jobs depends on the success of enterprises in the commodity market, which again depends on quite different factors than the level of formal education of the workforce.

As the educational level of the whole population rises, the poorly educated part of the population with inadequate work experience have fewer choices open to them when they seek to enter the labour market, where the possibilities are systematically jobs on the lower paid rungs of the wage work hierarchy, temporary jobs or unemployment. On the other hand, even the highly educated have to make do with middle and lower-level jobs more often than before, and more of them than ever have to face unemployment. The placing of more and more people with longer education in the lower levels of the hierarchy leads to a relative decline in the value of educational qualifications, an inflation in qualifications and a corresponding decrease in the competitive advantage brought by education. As well as the inflation problem relating to qualifications, the individual has to deal with the educational problematic. For example, the position of university-trained engineers on the labour market differs enormously at the moment, with those in the "hot" sectors of the labour market, such as information technology and telecommunications, offering the brightest prospects, while the prospects for those in the heavy industry sector are gloomy.

How to redesign the state organised educational system in relation to working !ife

At the onset of the new millennium, we are facing a situation where we have to be able to create both new industries and the new skills required for the promotion of new and old industries. The educational system, too, should adapt itself to the changes taking place in the world around us. What people need more and more is activated and functional human capital, the kind of entrepreneurial spirit and knowledge with which one can, when necessary, employ oneself and that others, too, may be able to employ. To this situation we could once again apply the enduring principles of work-based learning. Learning by doing (the apprentice-journeyman-master model) is especially useful in established industries offering work opportunities where one can really be trained in practice to accomplish increasingly demanding tasks. However, the problem with the developing of new industries (and partly new work skills) is the fact that it is impossible to practice them or in them in advance, since they are by definition new and not experienced before. This is one of the most serious challenges of the near future. We must also bear in mind that life-long learning is becoming a part of all our lives, since there are very few work or occupational tasks that remain the same throughout a person's whole working life. Life-long learning does not mean, and should not even have to mean primarily classroom learning, several years of teacher-led lessons in educational institutions to acquire a formal qualification. Rather it is a question of the availability of services that will advance the kind of knowledge that meets the needs becoming real for the person concerned at a given moment.

In an age of rapid technological change it has become increasingly difficult to predict the necessary skills required in working life. The whole idea of matching the educational system and working life one-to-one could well be abolished. As Psacharopoulos (1997) has suggested, it might be a good idea to delink vocational education and training from the formal school system. The formal school's main function is to instil general skills and to facilitate more efficient training later on life. A central bureaucracy is not the best institution to know what to teach in vocational subjects. Therefore we must find new ways to link vocational training to employers and encourage private training and provision of vocational training. In-company and work-based training combines the virtues of relevance (what to teach); funding shared by the company and the employee (in the form of lower wages during training); equity (because those who benefit also pay, rather than general taxpayers); incentives and accountability (because those who pay — the firm and employee — expect to see results). (Psacharopoulos 1997)

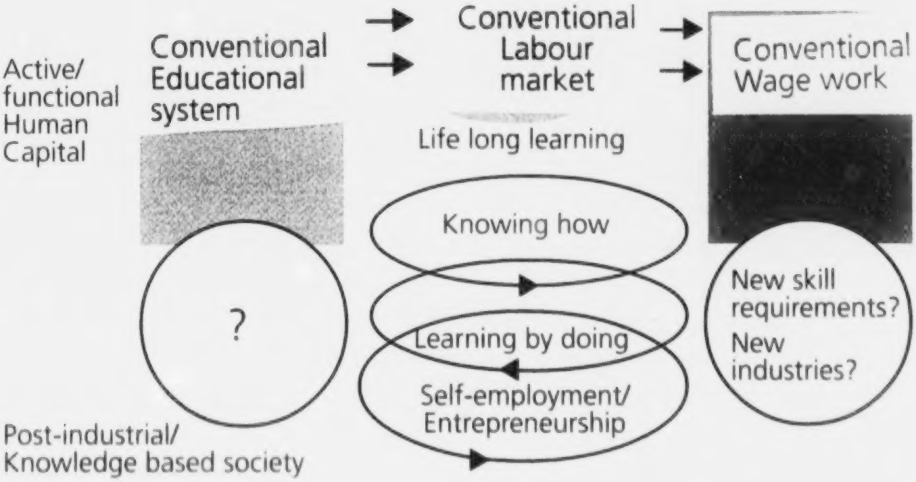
Active/
functional
Human
Capital
Conventional
Educational
system
Conventional
Labour
market
Conventional
Wage work
Life long learning
Knowing how
?
Learning by doing
Self-employment/
Entrepreneurship
New skill
requirements?
New
industries?
Post-industrial/
Knowledge based society

Figure 2. Training model for skill production in knowledge-based society

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Underprivilege cannot be eliminated by education alone, since the market mechanisms prevailing in society partly produce – or at least legitimate – underprivilege. The "effect" of education depends substantially on the reality from which people come into the educational system and what reality they go on to after education. In other words the educational system with its outcomes is firmly tied up on the one hand with households (families) and on the other hand with the labour market and working life. The modern institutionally-organised educational system is bound up in many ways with the foundations of a social system based on wage-paying work, and the continuity of this system-based education is guaranteed at least until someone thinks of another acceptable way to arrange the day-care, storage and training of growing children and young people to meet the demands of society.

Education and its relationship with working life has to be rethought. The new arrangements for learning work should produce the skills required in working life more efficiently. In addition to that, in making and maintaining employment contracts we should begin to stress the knowing how instead of formal qualifications and to make sure that people can acquire real and certified (additional) qualifications by learning by doing.

A reassessment of the justification of formal qualifications will be a difficult task. Any attempt to abandon the idea that, for example, a young person who has attained a professional qualification is justified to monopolise the work and the benefits it affords, will require intervention in the vested interests of strong stakeholder groups in society.

Instead of a summary: Life's small miracles – how functional learning can really be

When we want to match education, schooling and training with the needs of modern production, industries and services, first we have to find out what are the real skill requirements of present and future working life. Moreover, for finding out what those requirements are, we have to identify the 'logistics' of today's production, work and knowing how. Large companies become leaner by out sourcing some of their non-profitable business. Consequently, more and more firms belong to networks in different subcontractors' chains. On the one hand 'automation' takes care of the routine works, on the other, the continuous creation of differentiated 'products' implies new kind of knowing how, and need for human work and services.

Most of the skills required in the changing world of work one can learn by doing. The real life's problems are not given and just waiting for a ready-made solution, as in school, but they appear new and unexpected in the action itself. Stop and think is a moment of learning. Knowing how can grow only in a genuine working context by using proper tools, equipment etc. More and more often, also the clients (national and international enterprises, non-corporate public sector and citizens) play an inseparable role in the logistics of production and knowing how.

'Just in time' is again the slogan of the day. That is also one reason why learning by doing, learning by interacting, and learning by using are indispensable when acquiring the knowing how. (Dewey 1981, 1986) Correspondingly, the need for learning at school diminishes. Knowing how develops, and is best mediated, by modern applications of the apprentice-journeyman-master model: by acting in a genuine working environment. Apprenticeship training is again up to date in Finland.

Among others Finland too wants more entrepreneurs and entrepreneurship, but education is not the best way for increasing that. Statistics show that the more highly educated (read: the longer they have sat on school bench) the people are the smaller is the possibility that they become entrepreneurs. Also 'learning to learn' is a misguiding slogan. Learning as such does not exist: work and learning equals doing and knowing how. The knowing how cannot be reduced to 'knowing that'. (Ryle 1984). "We can know more than we can tell. (Polanyi 1967) "

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TRANSITION FROM SCHOOL TO WORK - UK POLICY DEVELOPMENTS, WITH SPECIAL REFERENCE TO QUALITY, PROGRESSION AND EMPLOYABILITY

Mr Alain Davies

Introduction

One striking feature of the British system is the range and diversity of options for qualifications and routes of study. This was recognised by the OECD in their recent review of transition from Learning to Work. It is both a strength and aweakness, or challenge. So in preparing for this session I faced a choice. To run through the UK Qualifications System, and recent/planned changes to it; or to set out and explain the very many policy initiatives affecting Young People and their Learning introduced since 1997 under Tony Blair's Labour Government.

Either would have taken far longer than we have here today. Instead I will say something about the principles and approach we are adopting. I have also sent the Conference Secretariat a background paper which you should receive as part of the proceedings. I hope this will enable us to compare what is happening in the UK with other countries' experience.

Principles

First some principles. These underpin all our Government is doing to support Young People in their Transition from Learning to Work. Taken together, they are about raising participation, retention, and achievement through Learning. Be it at school, after compulsory schooling up to age 25, or beyond.

They are about 4 things. Quality, inclusion, progression and employability. These are the foundation for a policy of Lifelong Learning for all, and a revolution in our culture that is gradually being introduced and taking hold.

Why?

Why is this important? Two reasons I think: First, it is very clear from international studies (such as those recently completed by the OECD) that our had not kept pace with our main international competitors. Second, our own studies show far too many dropping out of learning at an early age and at crucial stages. This must be halted and reversed, to reduce the adverse impact on individuals, their families, on communities, and on the economy.

Some Statistics

Let me illustrate the scale of the problem. It is large and complex. Too many drop out before 16, at 16 or between 16 and 17. Too many are not gaining qualifications before they leave school and too many, (100,000, possibly more), are doing nothing after that age ("status zero"). Only 46 % gain 5 GCSEs at A-C at age 16 and 7 % get no GCSEs at all. Of the rest a further 100,000 are in jobs without any training. And there are clear links between disaffection with and disengagement from learning, and with other aspects of social exclusion - teenage pregnancy, drug abuse, homelessness and so on. The problems are especially concentrated in inner city estates.

Even at slightly higher levels of achievement the picture is not very good. For example, as at last year, one in four 19 year olds had failed to get a Level 2 qualification. And although around half of all jobs are now thought to require at least Level 3 skills, 20% of all those under the age of 25 lack literacy and numeracy skills adequate for them to function at work or in the Community.

There are of course 'interdependencies here. Most of the 100,000 16-18 year olds doing nothing are unemployed. For this group the proportion with very poor qualifications or none at all at age 16 is huge compared to those with a Level 2 or equivalent at GCSE.

Action

So what is being done, and what more can be done? Several things. The solutions need to be similarly ambitious and complex as the problems. They also need to be coherent, to hang together. In particular we judge we need more and better measures to:

- reach, motivate and support young people;
- make education and learning more relevant and
- improve standards of all schools, colleges and other providers, to focus on maximising retention and achievement.
- remove barriers - both legal and financial to raise access & participation.

In short, we have introduced a new Vision, a comprehensive and coherent strategy, to address these. Known as ConneXions it aims to:

- increase participation so that all young people con continue in education and training until the age of 19; and
- improve attainment across all learning routes so that young people are able to reach their full potential.

If we look at each of the 4 strands in turn we see a revitalised education & training system for England taking shape:

1) In order to reach, motivate and support more young people, we:

- have Refocused Careers Service activity on those most in need or at risk of disengagement;
- are beginning to develop a new and integrated Youth Support Service, drawn from

Careers, Youth and Probation Services and others, with personal support and mentoring for those who need it;

- announced recently the development of a Youth Card - linking a range of benefits and concessions (such as reduced public transport fares, access to leisure facilities) to participation in learning;

- are developing improved tracking systems, using the Card, so fewer fall between the cracks;

2) We are making Education more relevant and appropriate by:

- introducing greater breadth and flexibility into the curriculum from age 14, including the extension of General NVQ qualifications available in schools, and reforms to A levels.

- introducing a Pre-vocational Gateway, offering Life Skills for those who need help to bring them back into learning, and to improve their employability;
- greatly expanded work experience;

- introducing a new Key Skills qualification from next year;

- considering a new Graduation Certificate at Age 19 and a new 2 year Vocational Degree;

- building on successful Modern apprenticeships brand we plan to rebadge our National Traineeship initiative as for example intermediate apprenticeship. We are also reviewing all frameworks with NTOs, TECs and others) to ensure better employability and progression from Levels 2 to 3 and beyond.

3) Standards and Quality are being improved in a variety of ways too. For example we:

- have followed the Schools Standards reforms (eg identification of, and intervention in, failing schools) with a similar focus on the Further Education System. These both celebrate excellence (eg Beacon Colleges) and root out low standards and mismanagement (by benchmarking, improved standards of training etc);

- are introducing a similar approach in Work Based Training, to improve the quality of the product, its image, and to improve performance in its delivery. Achievement is still far too low. Although 80% of those who leave Modern Apprenticeships programmes have jobs 6 months later, only just over half have gained a full qualification, and around 2/3rds leave without having gained a full Level 3.

4) A number of measures are in train to remove barriers:

- Developing the University for Industry and other ICT based approaches;

- Education Maintenance Allowance pilots;

- Improved post-16 school & FE student support, and increased training allowances;

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- Implementing Time for Study or Training legislation;
- Considering an entitlement to publicly funded education & training for all to age 21 or even to age 25.

This is an ambitious and substantial programme. Many of the measures are supported - indeed were recommended by - key partners. In particular:

- a Skills Task Force involving the main players from businesses, the trade unions and learning providers;
- work of the Social Exclusion Unit, reporting to the Prime Minister, looking at better integrated services that will make a difference to people's lives;
- very wide consultation over post-16 education and training reform - following a Green Paper "The Learning Age" a year ago and a White Paper "Learning to Succeed" this summer. They are being backed by massive investment (an additional billion pounds) into post-16 learning.

Finally

There is one over-arching reform that brings together many of the plans and initiatives. I have covered - and introduces perhaps the boldest change of all. That is sweeping away the separate funding and inspection systems for post-16 learning in schools, Further Education and Work-Based Training - and replacing them from April 2001 with a single Learning and Skills Council.

The LSC, and its 47 local, sub-regional arms, will have:

- a £5b education & training budget; drawing together from the Further Education Funding Council, Training & Enterprise Councils and from LEAs probably funding for school 6th Forms;
- 5 million learners post-16 in FE, WBL and schools;
- responsibility for identifying and meeting skills needs, and for achieving post-16 Learning Targets;
- promoting excellence in lifelong learning along with the Small Business Service which will promote workplace development and WBT to SMEs;
- working in partnership with learners, providers and employers - directly; through the SBS and YSS; and through recently established local Lifelong Learning Partnerships - to ensure integration of services locally and to provide a focus for community feedback.

I hope this gives you a taste of our new approach, and the challenges it poses to the Government and all partners. We will now need to introduce and consider the arrangements and evaluate their impact - against the themes I introduced at the start - participation, retention and achievement which are the highest quality, which support inclusion, provide opportunities for progression and which between them raise our levels of skills and sustainable employment.

Presidency
EURO
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Mr Osmo Kivinen, Mr Alain Davies, Mr Ole Briseid,
Ms Kirsi Kangaspunta and Mr Reinhald Selka

Mr Rauno Jarnila and Mr Matti Kyrö

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TRAINERS IN ENTERPRISES - DEVELOPMENTS IN GERMANY AND THE EUROPEAN DIMENSION

Mr Reinhard Selka

Contextual starting points

In Germany most of the school graduates that enter the dual system of apprenticeship will get their training in small and medium enterprises (SMEs). About half of the apprentice contracts are made with companies with less than 50 employees. In such enterprises there are no special departments for training. Instead, training takes place within the ordinary work process of the company.

However, also in bigger enterprises a greater amount of training has been transferred from special training facilities and from training workshops to ordinary work contexts.

Among other reasons there are two major background factors:

1. A training that is organised merely on the basis of pedagogic criteria has very little in common with the world of work. If training in enterprises is supposed to be work-relevant, it has to have a keen relation to the business processes of the enterprise.

2. The modern requirements for training skilled workers for enterprises cannot be met adequately by a training that makes a distinction between delivery of ´theory´ and ´practice´. This has been the accustomed distribution of roles between enterprises and school and this has had consequences for organising the learning processes at school and at the workplace.

Two further arguments are of importance from the enterprise point of view:

- Technological changes have reached in several fields of economy a speed that school (as an institution) has not grown accustomed to meet as regards the modernisation of its equipment.

- The German business life does not have a great confidence in the vocational schools concerning their ability to promote ´action competences´ (Handlungskompetenzen). There are indeed some structural reasons that strengthen this atmosphere of scepticism.

So, if the trainees the trainees are to be integrated in the work processes of the enterprises (after their initial training) quickly and without major costs for induction, then - at least in Germany - there are many reasons for the enterprises to be actively involved in the vocational education and training (VET) - also in the coming times.

Qualification requirements for trainers and respective measures to deliver qualifications to trainers

If training in enterprises takes place under these circumstances, then the trainers have to meet two basic requirements:

- They must have a sufficient competence in the substance and they have to be up-to-date as regards their professional know-how.
- They must be in the position to promote the so-called extra-functional qualifications - often characterised as 'key qualifications'.

The first of these two requirements is emphasised by the regulatory framework that foresees that the in-company trainers can only serve as trainers for the occupational field in which they have themselves received vocational training. The second point poses primarily methodological requirements concerning the delivery of new knowledge and concerning the integration of the learners in work processes. In addition to this it is worthwhile to note that in Germany there is since 1972 a legal regulation that requires that enterprises may take trainees only if they have trainers who have the required pedagogic certificate to act as trainers. This certificate can be obtained via specific 'training of trainers' schemes as well as via traditional 'Meister' courses. These schemes were redesigned in Spring 1999 and in that context the goal-setting on 'vocational/professional action-orientation' (berufliche Handlungsfähigkeit) was brought into focus.

GOALS OF THE CURRICULUM (FOR TRAINING OF TRAINERS)

Promotion of (integrated) action-competence (Handlungskompetenz)

- Self-organised planning, task implementation and controlling also within the training of trainers.

Creation of a new role-taking competence

- Providing free space for making decisions and for taking action
- Support for learning processes, not steering
- Giving advice instead of teaching techniques
- Launching and facilitation of learning processes instead of teaching contents
- New role as advisor in learning processes and planner of learning arrangements.

Promotion of methodological and planning competences

- Delivery of facts and knowledge structures (instructive dialogue)
- Support for self-organised learning (e.g. using 'Leittext' materials)
- Assignment-oriented approaches (e.g. case studies, projects)
- Collaborative modes of learning (e.g. group work).

In particular the changing role of trainers becomes transparent from these goal-

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settings. The ability to serve as a facilitator of learning and as a developer of learning arrangements requires at the same time action-oriented competence and solid experience in using different methods. This cannot be promoted sufficiently by the accustomed curricula that have been oriented to acquisition of knowledge. What is needed now is the reshaping of curricula (or alternative modes for preparing for the Trainer's Aptitude Certificate Examination (AEVO-Prüfung)) that are in accordance with these goal-settings. The framework plan for content (Rahmenstoffplan) gives indications to this effect at the same time as it gives guidelines for implementation of the curriculum:

REQUIREMENTS ON CURRICULUM IMPLEMENTATION: PROMOTION OF ACTION-ORIENTED LEARNING

1. Restructuring of the curriculum into seven fields of activity
2. Allocation of the contents knowledge to the tasks of trainers
3. Differentiation of contents according to the company-specific preconditions of the participants
4. Application of different methods of delivery within the curriculum
5. Preparatory and retrospective reflections as a methodological frame
6. Exemplary applications and recommended modes of delivery.

It is apparent that such a curriculum requires more flexibility than was possible to achieve within a framework that was provided by a catalogue of contents. Therefore, an effort was made to prepare a modular structure for the curriculum and to focus these modules on the tasks that the trainers are expected to master in the course of the training. This has brought into picture the seven fields of activity within which essential sub-activities have been formulated as modules.

The modules concentrate on kernel tasks of trainers and have been formulated in the shape of action-contexts. This indicates a clear distance from a formal transfer of knowledge.

The concrete mode of implementation will be influenced in particular by three elements:

1. It is not expected that the curriculum should focus primarily on delivering substance-related knowledge according to a logical structure - as was essentially the case with the previous content-related framework curriculum (Rahmenstoffplan). Instead, it is preferred that exemplary situations from the actual practice of the participants of the seminars should provide the basis for the pedagogic treatment of the action contexts.

2. The treatment of the content should promote to a high degree the capacity to self-organised activities so that self-learning and self-organised group work would get a major role in training.

3. The training cycle of the curriculum should be utilised as a period for testing methodological options and for making new experiences. For the particular modularised action contexts there are not only exemplary applications of methods, there are also indications of alternative modes of delivery and related methods of implementation. This is a necessary novelty and serves as a deliberate intervention to the accustomed methodological free space of teachers and trainers.

The two following examples demonstrate the character of recommendations of the new framework plan:

USING MODERATED GROUP DISCUSSION IN TRAINING

A moderated group discussion is a particular form of teaching dialogue in which the trainer gradually reduces his or her influence and thus promotes a more active of the trainees.

RECOMMENDED APPLICATIONS AND METHODOLOGICAL HINTS

In order to practice moderation of groups during the curriculum it is recommended to use stickers on the wall.

The participants should have a written user-friendly guideline to this method. A practical implementation of the guideline should be undertaken on the basis of examples.

SELECTION AND USES OF MEDIA

With the uses of media it is possible to enhance considerably the effect of lectures, instructions and teaching dialogue as a support for learning. Therefore, the participants shall learn in the course of the curriculum, what kind of media are normally available, how it is possible to prepare one's own inputs and how to make use of them. In the future electronic media are to an increasing amount available as support for training and they should be used in a way that promotes learning.

RECOMMENDED APPLICATIONS AND METHODOLOGICAL HINTS

It is recommended that this task will be implemented as a learning assignment. The task should be to prepare an overview on appropriate media and to relate particular media to favourable contexts of application and to possibilities to make uses of them. The presentation of outcomes should be given with transparencies or a eventually with a PC-presentation. It should be made clear that the media are not to be considered as aims of their own. The success in learning with media (in particular with electronic media) depends on whether the application of media has been linked in a relevant way to the training.Such a curriculum should be completed with a respectively shaped examination that investigates the ability to make appropriate use of the contents of the curriculum. Therefore, the final examination is geared towards an exemplary treatment of some contents and refrains deliberately from 'questioning' particular contents.

Comparisons between different countries

Because of the different educational systems it is not easy to agree on a covering definition of 'trainers in enterprises' and any effort for such definition leaves room for misunderstandings. In the languages that are used here (in the Finnish presidency-conference) the notions 'Ausbilder', 'trainer' and 'formateur' provide a certain insight. However, for the French-speaking area it is worthwhile to note that the respective distinction between 'formateur' and 'tuteur' is not relevant for the German vocational education and training. This is due to the fact that the German training at workplace contains both elements of promoting substance-oriented qualifications and social integration.

The educational routes that prepare for these functions have been regulated in a different manner. In Germany a training scheme of 120 hours' length is recommended and it is completed with the mandatory examination. A similar, although a clearly more reduced regulation (that foresees a training of 40 hours' length) exists in Austria. In Great Britain there are certified modules but the sum of them does not necessarily add up to a complex qualification. As an extreme opposite case it is possible to refer to the situation in Spain where only the first awareness on the problem starts to arise.

However, it is clear to many countries that the concept of 'teacher' provides a role model for the group of persons in question. This becomes manifest when we take into account that trainers who don't have an explicit role in delivering theoretical contents (i.e. who are not involved in teaching) have a lower status. Moreover, despite highly different income relations between teachers and trainers in West-Europe and despite highly comparable qualifications between both groups, it is possible to note an apparent status gap between teachers at schools and trainers at enterprises.

Concerning the professionalisation of the group of persons in question it is worthwhile to draw attention on the following aspects:

1. The status is among other things dependent on the target groups with whom the persons in question are working. If their activities are exclusively related to social integration and concentrates on disadvantaged groups, their status remains low. Therefore, an integration of different kinds of tasks would be preferable.

2. In the context of delivering work-place relevant learning contents it is not possible to make a strict distinction between theoretical teaching and practical instruction. Therefore, the persons in question are taking over both kinds of tasks although the vicinity to workplace determines both the contents and the strategies of instruction. Moreover, the integration of these tasks has been considered as an important issue for transnational research and exchanges of information.

3. For the kernel task - integration of trainees in work process - it is important that a genuine professional profile is being developed or maintained that differs clearly

from that of a full-time teacher in full-time education. Immediately when trainers start to orient themselves according to the role model of educator, they distance themselves from the concepts and activity structures that are embedded in their occupational work.

4. In addition to the substance-oriented qualification (as the basic precondition for being in charge of the integration activities) there is a relatively high need for social sensitivity and communication and counselling skills - in particular when one takes into account the target groups, the company-specific organisation and the amount of supervision work. On the one hand these skills and capacities need to be challenged so that they can be developed further; on the other hand they need to be supported to some extent although no pre-fixed model needs to be introduced.

5. In all Member States the integration of new workforce is taken care of (in one way or other) by VET professionals. The additional measures for social integration of other particular social groups (e.g. socially disadvantaged or unemployed) are taken care of in somewhat different ways. Finally, the pattern of organising these measures is dependent on the public models for financing the support measures for the respective target groups.

Distinctions and commonalities

GENERAL DEVELOPMENTS

Considering the current stage of technological development and the open market circumstances, there are similar basic chances for various strands of development. Given the fact that the supplier markets in new technologies are not limited to national borders, the same technologies are used to a great extent in different national contexts. However, it is possible to note differences that can be related primarily to the following background factors:

a) Economic development

The economic development - measured as the level of salaries and related to technological specialisation areas - determines not only the quantitative but also the qualitative need for qualifications. The markets are distinguished not only according to volumes but also according to appropriate utilisation of technologies under given economic circumstances. In this respect the qualification goals that trainers are expected to pursue in the context of their activity differ to a considerable extent. Therefore no simple subordination schemes - e.g. according to the level of salary - are applicable since the organisational modes for qualifying certain levels of skilled workforce may be shaped in different way in different national contexts.

b) Work organisation

Similar products are being produced in work organisations that are shaped according to clearly different patterns which in their terms are related to the overall structure of the respective educational system. Thus, a relatively high level of qualifications at the level of shop floor is related to flatter hierarchies and to decentralised allocation of responsibilities as well as a high specialisation at the lower level. In this respect not only the levels of qualification are different but also the social relations within the work organisation - which are to be developed and reproduced via training.

c) Geographic factors

It appears that in countries with dispersed population and long distances, other forms of communication and delivering qualifications are being developed that in areas of economic concentration. However, for the actual utilisation of different forms of Open Distance Learning or modern communication networks the crucial factor is finally the basic pattern of financing different modes of delivery.

All three parameters lead to seemingly similar scenarios concerning the different requirements for skilled work and related education. Thus they have a major impact on the respective requirements for VET professionals and for the nationally appropriate modes of shaping the training provisions.

CULTURAL ASPECTS

Comparative studies have reported of considerable differences in value systems between different countries - even between immediately neighbouring countries. Considering our attitudes and the related modes of perception we tend to be shaped by our cultural heritage. In addition to this we tend to be stuck - even if we wouldn't wish this to be the case - to some value judgements and prejudices on our neighbours that are predominant in our domestic environments.

Research in this area distinguishes eleven dimensions for specifying a culturally specific pattern of behaviour. Some of these dimensions are of immediate relevance for training in enterprises, others -considering the needs of the training personnel - are less easy to operationalise. In the following three dimensions are touched upon as examples:

a) Communication style

A fundamental distinction is being made between explicit and implicit communication style. Explicit means in this context that in any respect the aim and meaning is made apparent. Thus, e.g. in the German culture it is an accustomed pattern that work-related instructions are very manifest whereas e.g. in the 'fine British style' an instruction is being coded from a statement. It is obvious that this has immediate consequences for the training practices and also for the behaviour of the supervisors.

b) Authority distance

This notion refers to the acceptance of authority that persons possess over others due to their occupational or societal position. In the context of vocational education and training and in the context of organisational hierarchies this is of immediate relevance, since in extreme cases trainers and supervisors are expected to make decisions (with reference to their position) that count as self-evident and unquestionable. In other extremes such decisions are required to be justified by a content-adequate legitimation in order to be accepted.

c) Perception of space

This dimension is easy to grasp when we think what kind of distances people keep to each other while they are in conversation or when they are standing in the queue. In a mediated way - but likewise in a culturally different way - the concepts of vicinity and distance have a role to play in occupational work and in training contexts. How close is it appropriate to approach the private space of learner, where begins the realm of discretion?

It is not possible to explore these issues any deeper in this context although they are of fundamental importance for transnational contexts, as are also issues that are related to languages and to the semantic content of concepts. The fact that open market processes promotes a new mixture of similar partners from different Member States - insofar as this is publicly transparent - provides us plenty of observable material. In this context the above mentioned functional levels of training in enterprise are crucially involved in the process of implementation of such transnational cooperation.

Concluding remarks

The brief explorations on commonalities and differences between trainers and their activities in different Member States will be concluded with three assumptions. These assumptions indicate some prospects for joint development initiatives:

ASSUMPTION 1

The organisation of learning processes and the methodologies that are being applied in the context of training in enterprises may prove to be more similar than the national educational systems within which they are embedded.

ASSUMPTION 2

The tools for training in enterprise are predominantly universal: The more similar the tasks for which the training prepares, the more similar becomes also the organisation of training in enterprise and the methodologies that are applied.

ASSUMPTION 3

However, the utilisation of instruments and arrangements differs considerably. In transnational context this provides essential problems of transferability but also the greatest chances to learn from each other.

EVALUATION OF THE REFORM OF WORK-BASED LEARNING IN NORWAY

Mr Ole Briseid

Background

During the 90s Norway has adopted several reforms in its education system, one of them in upper secondary education, which was adopted in 1992 and implemented from 1994. This paper deals with the vocational training part of that reform, with a special focus on work-based training and the links between school-based and work-based learning. The implementation of the reform has been followed by a comprehensive evaluation. The final evaluation report was delivered in January 1999.

Basic philosophy of the vocational training part of the reform

The young people that we educate today will be on the labour market up to 2050. What we see ahead are quick and far-reaching structural and technological changes, increasing internalisation, new types of work organisation, an increasing skills-gap and fundamental ethical challenges. To meet the challenges from this future society it is on the one hand necessary to build a broad and stable "rock" of skills and competencies which can constitute a basis for life-long learning as changes take place.

One the other hand, the labour market of today needs skilled workers who have the specialised vocational qualifications enabling them to go straight into production after completed initial training.

In view of these two seemingly conflicting interests (long-term and short-term) the following questions rise:

- How do we design a system of vocational training which at the same time can provide the broad and stable basis for lifelong learning and also cater for the more immediate needs of the labour market?

- How can we shape a system of vocational training that would be attractive to young people (and parents) and consequently stop the present tide away from vocational and into academic training?

The main elements of the vocational education reform

There are in particular 4 principles which form the basis of the reform in vocational education in Norway:

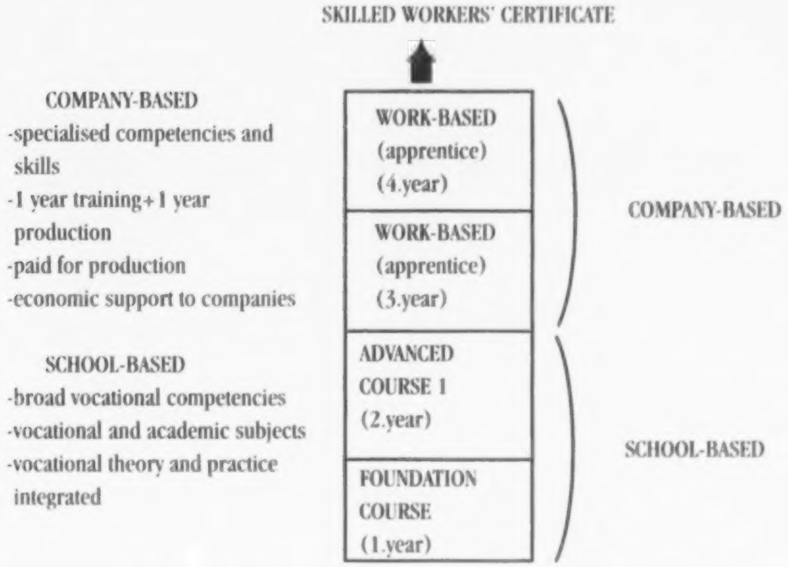
1) A broad concept of knowledge must be applied in all curricula. Factual theoretical and practical knowledge and skills - broad and more specific - are important. But equally important is the development of personal qualities like social and co-

operative skills, creativity, entrepreneurship, empathy and the learning-to-learn-ability. The enhancement of ethical and moral skills must also be an integral part of the learning process.

2) There must be closer links between vocational training and higher education. The possibility of access to higher education from vocational training in upper secondary *should be made easier. This is important both in view of the lifelong learning* process and in view of the status and attractiveness of vocational training.

3) There must be very close interaction between the world of work and the school-based part of the learning. And the co-operation between the social partners and the public authorities must be close and formalised on all levels of governance.

4) There so-called 2+2 model, which is the system of linking broad school-based-vocational training (2 years) to a specialised work-based training (2 years). The idea of this integrated system is to meet the double perspective mentioned above (short-term and long-term) and to divide responsibilities between school-based and work-based training in a deliberate and consistent way. The philosophy is that in a country where the vast majority of enterprises are small and mediumsized, schools will be best at providing the broad and basic theoretical and practical competencies where as the enterprises will be best at the specialised part. The companies have the equipment (which public authorities for financial reasons would have problems providing and keeping up-to-date in schools) and they have skilled and up-to-date instructors. And they provide a real setting for socialisation into working life. The 2+2 model is shown below:


SKILLED WORKERS' CERTIFICATE
COMPANY-BASED
-specialised competencies and skills
-1 year training+1 year production
-paid for production
-economic support to companies
SCHOOL-BASED
-broad vocational competencies
-vocational and academic subjects
-vocational theory and practice integrated
WORK-BASED (apprentice) (4.year)
WORK-BASED (apprentice) (3.year)
ADVANCED COURSE 1 (2.year)
FOUNDATION COURSE (1.year)
COMPANY-BASED
SCHOOL-BASED

Evaluation

During the spring of 1999 the experiences of the first 4-5 years were summed up and presented to parliament in a white paper. The summary was mainly based on the evaluation report, but also on extensive hearings with social partners, teachers' unions, pupils' apprentices' organisations, country authorities and others. Below follows an overview of the results so far:

POSITIVE OUTCOMES

- Philosophy generally accepted
- The 2+2 model works well for the great majority of pupils/apprentices
- The status of vocational training seems to improve
- The number om apprenticeship - places has grown considerably
- The educational attainment - also in specialised skills - seems to be satisfactory
- The trasition to work seems good
- The co-operation between social partners and authorities has improved
- The links between school-based vocational training and work-based have become closer
- The quality of instructors and assessors have improved due to in-service training

NEGATIVE OUTCOMES

- A minority of pupils is not motivated for the two first years in school
- The integration of theory and practice in school is not satisfactory enough
- The 2+2 model needs more flexibility - depending on vocational area and student ability/motivation
- Lack of apprenticeship - places in some vocational areas/lack of apprentices in others
- The percentage of girls in apprenticeships increased, but gender inequality subsists
- Certain ethnic groups have problems obtaining apprenticeship-places
- The quality of instructors and assessors must be further developed
  Process evaluation and final testing of apprentices must be improved

THE EFFECTIVENESS OF ON-THE-JOB TRAINING

Mr Marcel R. van der Klink

Introduction

The workplace as a learning environment has a long history. It is probably the oldest way of professional and vocational learning. Most well known example is the system of the guilds in the Middle Ages. The industrialisation in the eighteen and nineteen century led to the dismantlement of this system. New forms of education arised. The focus was on fulltime school-based training. The workplace was no longer perceived as the place to acquire vocational skills and knowledge. After the Second World War the participation in school-based training raised, while the apprenticeship system was merely neglected (USA, The Netherlands, England), with exception of the dual system in the former BRD.

In the eighties a countermovement came up: revaluation of the workplace as learning environment took place. Arguments for the revaluation of the workplace were derived from research into the limitations of traditional school-based training.

In this contribution we will focus on the value of the workplace as a learning environment. First the focus is on the concept of workplace training itself. After the clarification of the concept of workplace learning, attention will be paid to what we know about a specific type of workplace learning: on-the-job training. This contribution will end with some concluding remarks on this subject.

Learning in the workplace

During the former decade researchers began to question the usefulness of the school as the natural learning environment. Well known is the work of Resnick (1987) who argues that learning outside the community of practice leads to alienation. Knowledge and skills acquired in (vocational) schools do not contribute to a deep and broad understanding of the everyday world. Resnick describes this phenomenon as non-functional transfer. Her view was more or less supported by the anthropological studies of Lave and Wenger (1991) and Scribner (1986) that emphasised the value of informal learning in work situations. Practical knowledge acquired in the work situation turned out to be essential for optimal job performance (Wagner & Sternberg, 1986).

The distinctive features of workplace learning are best illustrated when these are compared to the characteristics of traditional classroom learning. Figure 1 provides an overview of the main features of both types of learning. This overview is based on the work of Münch & Kath (1973), Van Onna & Kraayvanger (1985), Resnick (1987), Scribner (1986) and Streumer & Van der Klink (1997).

EVERYDAY LEARNING IN THE WORKPLACE	TRADITIONAL CLASSROOM LEARNING
- learning process is incidental and occurs as a non-intentional side effect of performing tasks	- the curriculum shapes the content and objectives of the learning process
- learning process subordinate to production process	- learning process is adjusted to students prior knowledge
- learning is context-bound: the tasks determines the content of the learning process	- learning is general: a variety of generic skills and knowledge
- use of tools that support the performance	- emphasis on abstract reasoning and use of symbols
- practical thinking: problem-solving strategy: a good solution will do	- emphasis on the investigation of the best possible (theoretical) solution
- collective learning: learning with and from colleagues	- learning is mostly individual learning

Figure 1. Learning in the workplace compared to traditional school-based learning

It is noteworthy to mention that the picturing of the two types of learning is rather idealistic. Both types of learning represent in fact the ends of a continuum of learning practices. The more the learning is situated in the every day world of work, the more the learning process can be characterised by the features presented in the left column of Figure 1.

To explore further the concept of learning in the workplace two dimensions are here introduced:

- intentional versus not-intentional learning
- nature of the interventions to structure the learning process

Intentional learning can be defined as goal oriented learning. Learning goals are defined and interventions are taken to assure that trainees acquire the knowledge, skills and attitudes. The workplace is then an explicit chosen learning site. Dual training schemes, internships and structured on-the-job training for new employees are examples wherein the workplace is used as intentional learning environment.

On the other hand the workplace can perform as an incidental learning environment. In that case there are no interventions to steer the learning of employees. If then learning occurs it is mostly the side effect of performing tasks. For this to happen it is required that the work tasks challenge employees. Baitsch & Frei (1980) refer to this as the learning potential of the work environment. Literature provides many examples of incidental learning. Well known is the work of Tough into adults' learning projects wherein learners autonomously determine learning goals and learning activities. Watkins & Marsick (1993), however, argue that incidental learning in the workplace is mostly the result of a combination of organisational and personal circumstances. Further they point at the problematic nature of incidental learning. It can be characterised as 'trail and error' and it often results in only a superficial understanding of work operations (see also Scribner & Sachs, 1990). In many cases it will result into insufficient knowledge and skills to handle exceptional, non-routine, situations with of course negative consequences for the quality of the production process.

It is common to focus on learning in the workplace as intentional and not-intentional learning. A less common way is to look at the mechanisms that steer the actual learning process. In general three mechanisms can be distinguished: structuring by training interventions, structuring by interventions in the work process itself, structuring by the individual employee. Examples are presented in Figure 2.

	INTENTIONAL LEARNING	NON-INTENTIONAL LEARNING
STRUCTURING TROUGH INTERVENTIONS IN WORK PROCESS	• project groups • job enrichment • job enlargement • job rotation	• substitute for a colleague
STRUCTURING TROUGH TRAINING INTERVENTIONS	• job aids • EPSS • mentoring • on-the-job training	• hidden curriculum on-the-job training
STRUCTURING BY THE INDIVIDUAL EMPLOYEE	• learning projects	• trial and error

Figure 2. Examples of workplace learning (Van der Klink, 1999)

In the discussion about learning in the workplace much emphasis is placed on training interventions to steer employees' learning processes. De Jong (1992) feels that combinations of work process and training interventions to steer learning are most common in practice. However, according to Onstenk (1997) the possibilities of interventions in the work process to enhance learning are easily overlooked and not exploit to their full potential. Especially in literature about HRD attention for the potentialities of the work process itself to enhance learning are not recognised. It is not the place to discuss the (dis)advantages of the different ways to structure learning in the workplace. But Onstenk has a point when he concludes that attention for the learning potential of work process interventions is lacking in theory and practice.

Figure 2 makes explicit that learning in the workplace is a multifaceted concept and has many appearances. This makes it necessary to limit the focus of this contribution. In this contribution emphasis is placed on one example of workplace learning: on-the-job training. The following sections focus on the concept of on-the-job training and the effectiveness of on-the-job training.

Basic types of on-the-job training

Without exaggeration one can state that at the moment there seems to be a rediscovery of the potentials of OJT. It is put into practice on a large scale in HRD and in vocational training. Characteristic for OJT is that the learning is intentional. Interventions are scheduled to guarantee that specific training goals will be achieved. There are three basic types of OJT:

- OJT as part of dual training schemes (apprenticeships);
- OJT as part of fulltime vocational/professional education (internships);
- OJT as company training.

The characteristics of these three basic types are presented in Figure 3.

In the following section several aspects of OJT are highlighted.

OJT as an effective training method?

ADVANTAGES OF OJT

There are several advantages attached to the concept of OJT:

● OJT enhances the development of social skills, like communication skills, learning to work in a team. Especially from the side of employers organisations emphasis is placed on these skills.

● attractiveness of practical education. Since learning in the workplace is practical by nature it provides learning opportunities especially for older workers (Münch, 1990) or for those who encounter problems with the theoretical, abstract nature of fulltime school-based training

● development of a realistic view on the content of a profession. Participation in the actual workplace provides students possibilities to discover the various aspects of their future jobs.

	INTERNSHIP	APPRENTICESHIP	COMPANY TRAINING
PLACE OF OJT IN THE CURRICULUM	Internships are part of fulltime vocational/ professional training. Training on the job is limited in time compared to classroom training.	In dual training schemes, training on the job is the dominant way of training. Only a modest part of the training time is dedicated to classroom training	In company training OJT is sometimes combined with classroom training, sometimes all the training is delivered in the workplace.
TRAINING GOALS OF THE OJT	1) orientation on future profession 2) qualification for professional field	qualification for specific function	qualification for specific job/tasks
LENGTH OF OJT	one week for orientation (first year of the educational program) several months at the end of the educational program	several years	length varies and depends on the training goals (one day – several weeks)
DIVISION OF RESPONSIBILITIES	educational institute is mainly responsible for design and content of OJT	educational institute and company are both responsible for design and content of OJT	company is responsible for design and content of OJT
POSITION TRAINEE	Trainee is a student and has no responsibilities for the work process	Trainee is employee with a special status compared to other employees	Trainee is above all employee

Figure 3. Basic types of OJT (Van der Klink, 1997)

- acquisition of practical knowledge that is not in the books but which is of up most importance for effective job performance (Wagner & Sternberg, 1987)
- learning to perform tasks with the most up to date tools and equipment. Most vocational schools and training departments can not afford to buy the latest equipment just for training purposes
- learning to cope with work pressure, acquisition of routine

DISADVANTAGES OF OJT

Beside benefits, OJT has several disadvantages:

- acquisition of theoretical knowledge and complex skills. Time and didactical expertise are lacking in the workplace to deliver these knowledge and skills. Off-he-job training is a more suitable environment to acquire this. This is also the case for the development of general learning strategies that improve participants' transferability.

- acquisition of generic skills and knowledge is difficult. According to Baetghe (1970, 1974) on-the-job training enhance identification with the own job but at the same time it inhibits to develop a broader perspective. Critical reflection on work procedures, organisational policy etc. is very difficult to incorporate in on-the-job training wherein adaptation to the job requirements is dominant.

- Possibilities to learn the various tasks/skills that belong to the core of a profession. Not every job provides enough possibilities to learn the core of a profession (Streumer & Van der Klink, 1997).

- OJT depends on the willingness of employees. In times of economic recessions employees' willingness drops dramatically.

Effectiveness of OJT

From a training perspective it is necessary to know what training design characteristics contribute to the achievement of the training goals. However, research into the relationship between training design of OJT and training goals is rather scarce.

Research of De Jong (1988) into the internships in teacher education show that improvement of the didactical quality of internships did not result in better learning results. Nieuwenhuis (1991) and De Vries (1988) investigated the effects of didactical improvements in the internships in secondary vocational education. No effects of didactical improvements were found. Frietman (1990) investigated various didactical designs of dual training schemes. He reported that more sophisticated didactical designs did not correlate with trainees' learning outcomes. Investigation of six OJT programs by Glaudé (1997) showed that most OJT was unstructured (no didactical arrangements were made) and effects were even unknown because evaluation of trainees' job performance did not took place. Van der Klink's investigation (1999) of deliverance of OJT programs in call-centers and in post offices showed that only modest improvements in job performance were achieved. Further, training characteristics (quality of the training deliverance, length of the training) did not have an impact on the improvement in job performance. Predictors of training outcomes were: work pressure, management support and trainee characteristics as job experience and self-efficacy.

The research results of the various projects together show that 1) the quality of the training itself has no or only a modest effect on the achieved training outcomes and 2) there are many difficulties attached to OJT. These difficulties are:

- lack of management support for OJT
- tension between production targets and learning possibilities
- work pressure inhibits instruction and feedback
- lack of co-operation for the improvement of didactical skills of OJT-instructors
- lack of communication between trainee's instructor and educational institute/ training department
- neglecting trainees special status and the use of trainees as full employees
- trainees do not want to be treated as trainees but as any other employee and therefore they are not willing to carry out assignments for their training (e.g. learner report).

Research into the effectiveness of OJT showed that organisational characteristics have a major impact on the possibilities to use the workplace for OJT. Characteristics of the workplace that has an impact on learning and training are:

- Variation in tasks that represent the job/function/professional field.
- possibilities to alter the sequence of tasks and work pressure
- (increasing) autonomy with regard to the prosecution of tasks
- interaction with significant others (colleagues, supervisor, instructor, clients). Especially the behaviour of colleagues and supervisor is of paramount importance (see Gielen, 1995; Van der Klink, 1999; and Xiao 1996)
- work conditions like payment
- full participation in the team (meetings etc.)

From all characteristics, trainee characteristics are of up most importance. Trainee characteristics that predict the effectiveness of training are: educational level, prior job experiences, self-efficacy and trainees' motivation for the training.

Although above mentioned research do not allow to draw final conclusions, it is estimated that trainee characteristics account for the majority of the variance in training outcomes, and that organisational characteristics are more significant than training design characteristics for the explanation of training outcomes.

Conclusions

On-the-job training is widely applied in vocational and professional training as well as in HRD-programs of companies. How can we, at the end of this contribution, value the worth of OJT?

It is not the intention of this contribution to neglect the worth of OJT. Its practical nature, the participation in real job contexts appeal to many students and employees. It is necessary that OJT has a place in every curriculum of vocational and professional education.

On the other hand it is clear that OJT faces several problems, which can not be easily solved. It results easily in learning by doing, the learning is more job and company specific and therefore its contribution to the acquisition of broad transferable skills is doubtful. Attempts to improve the didactical quality of OJT has not resulted into more favourable training outcomes. Apparantly didactical improvement is overrulled by workplace conditions (e.g work pressure, management support) that have more impact on the actual behavior of trainees and instructors.

There exists no such environment as the ideal learning environment. OJT as well as classroom training face advantages and problems. In many curricula a combination of both training methods is seen as a response to the learning objectives of the curriculum. Here a plead is made to rethink the contradiction between classroom and OJT. The challenge is not only to use classroom training and OJT but to enrich both learning environments with powerful learning environments that are practical, context-based and at the same time offer opportunities for the development of generic and transferable knowledge and skills. These can be located in schools or in the workplace. Simulations with the use of ICT in schools or the application of vestibule training and learning islands in the workplace are examples of such rich and powerful learning environments that combine the best of classroom and workplace.

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PRESENTATION OF THE RESULTS OF THE FORUMS AND PANEL DISCUSSION

REPORT OF FORUM 1

Mr Heikki Suomalainen

Each and every country has its own foundation and educational principles, to which the on-the-job learning philosophy is applied. The exchange of experience and information concerning national solutions as well as the deliberation of common European priorities is an essential part of the development of the cooperation found between vocational education and training and working life.

In the Forum on-the-job learning was approached at a universal level as well as from the standpoints of the various countries involved. At the beginning of the Forum, the changes occurring in operational sphere of vocational education, such as globalisation, development of IT and increased flexibility in labour markets, came to the forefront of the discussion. These changes increase the significance of education and learning. Indeed, a strong base for lifelong learning has been established in Europe. Adult vocational education is anticipated to become an even more important part of European educational systems. On the other hand, the importance of informal learning was brought up. However, from the point of view of formal education, the challenge posed by informal learning is difficult to answer. With this in mind, increasing the significance of a formal adult vocational education is no longer a given.

In discussing on-the-job learning, however, the significance of a formal education should not be forgotten. As a foundation for lifelong learning, there must be a functional educational and training system. For example, in Portugal and other Southern European countries, the significance of a formal education in the vocational education of young people is still important.

Two central on-the-job learning models were discussed at the Forum: the French alternance and the dual system of Central Europe. The alternance system is much more versatile and less institutionalised than the dual system. The alternance system is in essence also more "social" than the dual system, in that its primary interest group consists particularly of unemployed youths and youths with a minimal level of education achieved. By its very nature, the alternance system can serve as a training as well as a facilitator of employment.

The dual system is renowned for its many good qualities. At the Forum, however, the more problematic aspects of the dual model were discussed, such as the limited correspondence of educational qualifications with the expectations of the workplace, the lack of cooperation between training institutions and the workplace and the undeveloped state of entrepreneurship. The dual model must be updated to more effectively meet the needs of the labour markets.

In Finnish discussions concerning on-the-job learning, particular emphasis is placed on the significance of cooperation between labour market organisations. From an employee point of view, it is essential that the trainees are not concerned as competitors in the workplace. On-the-job learning is first and foremost about learning; work comes second.

The educational systems of Central and Eastern Europe were also discussed at the Forum. As a result of the socialist systems these countries are still governed by strong, school-based traditions. At the initiative of the European Training Foundation, new forms of occupation-oriented training models were developed for enterprises operating in a market economy, which in themselves ease the transition of these formerly socialist countries into the European educational system.

Discussions held at the Forum can be summarised under the following headings:

- On-the-job learning is expanding in Europe
- Cooperation between social partners must have clearly defined rules at both the national and local levels
- Dual education system must be modernised
- Alternance has achieved excellent results. Alternance increases social skills and changing the rules and attitudes of working life
- Vocational education and training must be more service-oriented and more emphasis must be placed on entrepreneurship and intrapreneurship
- Vocational education and training must provide the foundation and support for lifelong learning
- Lifelong learning is only possible if it is based on a functional formal system of education and training
- Lifelong learning requires assesment of skills and knowledge (including personal competencies), and the assesment must be validated independently from the formal school system

REPORT OF FORUM 2

Mr David Oatley

Forum two addressed the issue of improving the impact of transnational training programmes at the national and European level, focusing in particular on the LEONARDO DA VINCI programme.

The forum was opened by the chairman, Mr **Markku Markkula**, who argued that dissemination was an important, if not a vital factor, in the success of any transnational project. He then issued a challenge, calling for a European wide dissemination strategy for LEONARDO - a strategy which could perhaps be used as a blueprint for other programmes. Such a strategy was especially important at a time when the Commission and Member States were preparing for the second phase of LEONARDO, and seeking to consolidate and build upon the achievements of the past five years.

The forum began to define what such a strategy should be. There was general agreement that it should be conducted at three interdependent levels:

- first, general information about the LEONARDO programme;
- second, the dissemination of specific information about LEONARDO projects including their content and products; and
- third, valorisation activities to embed the innovation produced by LEONARDO projects in policy and practice.

Having defined these three levels, the forum examined how to improve impact of projects. It was felt that the best disseminators of results and experiences were, of course, project leaders themselves. However there was much that the Commission and National Agencies should do to facilitate their efforts. The tools or methods discussed could be grouped under three broad headings:

- first, the Commission and National Agencies should provide effective support and advice to projects. This should start from the inception of a project proposal. The Commission and National Agencies should encourage project promoters to address themes of relevance to policy makers. In addition, they should help promoters to develop broad, "multi-player" partnerships which include the users of training such as companies, sectoral bodies and the social partners - organisations which could assure the relevance of the project and help it achieve a wider impact. National Agencies should also provide training workshops in dissemination techniques and publish guidance documents such as the guide on "Methods and Tools for Effective Dissemination" produced by Mr Markkula and the Finnish LEONARDO Centre;
- second, the Commission and National Agencies should provide information on project activities and results in an accessible and user-friendly format. There was general agreement on the need for project databases at both the Community and

national levels, and Mr Sergio Corti outlined the Commission's proposals for an informatics platform under LEONARDO 2. The forum believed that it was important that the new programme's databases should have a common framework, but that they should also have the flexibility to take account of national characteristics. They should also make use of the Metadata standards for learning resources that were currently being developed; and

- third, the Commission and Member States should produce thematic analyses of the results of transnational projects which could then be disseminated to policy makers. Several countries were already organising valorisation seminars to bring together project leaders and policy makers to examine the results of LEONARDO projects and discuss their implications for vocational training policy.

In conclusion, it was argued that:

- the second phase of LEONARDO should continue to move from maximising participation to maximising impact. While participating in transnational projects is undoubtedly good in itself, it is necessary to ensure that projects achieve a wider impact beyond the individuals and organisations directly involved; and

- the purpose of LEONARDO is to implement a Community vocational training policy that supports and supplements Members States' systems and arrangements. LEONARDO does not seek to replace or overturn national policies, but to add value to them, by facilitating the exchange of good practice and the development of innovation. Effective dissemination is crucial to achieving this impact.

REPORT OF FORUM 3

Ms Carita Blomqvist

Wide-ranging, but rather concrete subjects were addressed at the Forum: on-the-job learning abroad and the promotion of mobility. Issues concerning implementation of the EUROPASS Training (ET) were given special attention. One of the primary considerations found that the establishment of a European educational and labour market area requires the cooperation of education and the workplace, in the spirit of lifelong learning.

The significance of mobility in vocational training has increased during the past decade, especially in regard to changes occurring in labour markets: new types of qualifications that, for example, international experience provides, are required. On the other hand, labour markets should be able to put their trust in the professional skill of a mobile workforce – educational systems must be perceived by the employer as being credible, regardless of the Member State in which the degree was received.

The primary issue of the future is indeed the quality of international training. On one hand, attention is given to the personal development of the student while, on the other, it is crucial that the learning environment be given special consideration. In regards to the learning environment, just how well and how closely the student familiarises himself with the country in which he will be studying as well as the working conditions at his place of employment is of particular importance. The more familiar a learning environment seems, the better the chances are for achieving success during training. Vocational training systems should be defined more clearly, in mutually agreed terms: concepts should have the same meaning for both the originating and receiving parties.

Internationalisation and mobility issues were concretised in a presentation of EGIN (European Graphic Media Industry Network), which was initiated by employer/employee organisations of the graphics industry. Currently, members also include research facilities, universities, vocational colleges, vocational schools and centres for continuing education.

The Federation of the Printing Industry in Finland is also involved in the interesting BenchComp project, in which the job descriptions of book printing employees and levels of expertise in different countries are compared, resulting in the description, evaluation and recommendations for each country's vocational training system. The project also evaluates the degree of competency youths demonstrate in working on a Europe-wide basis.

A majority of the forum was devoted to discussions on the ET, which is a completed document that provides a uniform definition of European pathways degrees received in other member states. It was emphasised at the forum that, although the ET is primarily a documentation instrument – a tool – which defines European pathways, a prerequisite for its application is comprised of three points concerning quality control:

1) A contract concerning foreign training must be signed in advance between the originating and receiving countries,

2) a mentor shall be appointed for the foreign training period and

3) the foreign training must be in accordance with the degree being sought in the home country.

Using these quality criteria, the level of foreign on-the-job learning will be raised. When items fulfilling these criteria are contained in the ET, they are more likely to be realised.

In regards to use of the ET, reference was often made to the recognition of degrees and studies. Over the past decades, degree recognition has shifted from a complete correspondence of requirements to approval, comparability, clarity and openness. In regards to the communication of information, the Europass is well suited to this trend.

Implementation of the ET in Germany and Portugal was presented separately, where it was found that several matters concerning the use of ET remain unresolved. The Commission's decision on implementation of the ET leaves a great deal of power in the hands of the parties involved. Due in part to this, nationally appointed experts serving in cooperation with the Commission comprise a task force, whose purpose is to establish universally applicable regulations for users of the ET. There is a considerable amount of interest in the use of the ET by Member States. Employer and employee organisations also see the ET certificate as a principally positive development, but desire to actively monitor its use and effects.

Because use of the ET is based on voluntarism, it is vital that all involved in the field – educational institutions, students, companies and employer/employee organisations – have an understanding of the added value a uniform certificate provides mobility and effect its implementation. The parties involved in employment training benefit from the forging of alliances between the realm of education and enterprise and Member States of the European Union. For example, it will be easier for the holder of the ET to use the certificate in seeking employment the more widely recognised it is within the EU.

The ET should be seen as a cooperative effort, a tool for cooperation, not as, for example, something that standardises degree-based internships. Currently, it seems as though use of the ET is on the increase, which in turn requires its monitoring and evaluation immediately upon implementation. And this will indeed occur: in three years the Commission will render its decision on this implementation and evaluate the effects of this decision on the promotion of mobility in work-linked and, especially, apprenticeship training.

REPORT OF FORUM 4

Ms Kirsi Kangaspunta

Issues concerning the impact and quality of on-the-job learning from a variety of viewpoints were addressed in the forum. The topic of discussion was approached based on the analyses of researchers and experts as well as the goals of Norwegian and British vocational education and the experience gained from them.

It was the thesis of Mr **Osmo Kivinen** that the majority of skills needed in an ever changing society can only be learned by doing. Only in a classroom context are there questions, to which one can find the correct answers. In real life and the workplace solutions to problems are found in the actual execution of processes: in work and its related social interaction. Apprenticeship training is, in this case, an up-to-date and functional form of education.

Mr **Alan Davies** described the background and goals of Great Britain's vocational educational reforms. The reason behind the reforms is an exceptionally large number of disadvantaged youth. The goal of the reforms is to provide every youth access to an education until the age of 19, and to improve the results at all levels of education. The methods being employed are:

1) motivation and guidance (guidance services intended for those in danger of disadvantaged, various student discounts),

2) increase in the relevance of training and study (development of training content, specialised life management sessions in connection with training, on-the-job learning, new qualifications)

3) development of quality (evaluation of schools, evaluation of on-the-job learning)

4) removal of obstacles (development of guidance counselling, financial aid and study leaves). The reforms also involve a significant administrative reform, in which the hitherto separate administration and funding of education for youths over 16 years of age is combined into a single unit. (effective April 2001, the Learning and Skills Councils).

Mr **Reinhard Selka** analysed on-the-job training and its various stages. He drew particular attention to the status of instructor. The instructor is required to commit himself to the work process, he must maintain a close correlation between theory and practice, must be technically up-to-date, must serve as a promoter of key qualifications and must utilise a variety of methods. These points must all be taken into account in the training of instructors.

Mr **Ole Briseid** analysed Norwegian on-the-job learning reforms (2 + 2 model), both positive and negative outcomes. The goal of the reforms was to unite the long and short-term goals for vocational educational development by establishing a model, with which, on one hand, an extensive foundation for lifelong learning could be created and, on the other, the required preparations for immediate employment could be provided. Another goal was to increase the appreciation and attractiveness of vocational education. According to the evaluation results:

- the school-based and company-based training models have achieved general acceptance and are well-suited to a significant majority of students
- the appreciation of vocational education seems to be improving
- the number of apprenticeships has increased significantly
- learning results appear satisfactory
- transition to the workplace seems to function well
- cooperation between education and the workplace has increased
- school-based and company-based learning stand closer to one another
- the quality of job counselling has improved

Conversely:

- some students have motivation problems during school-based training
- there are still discrepancies in the integration of work and theory
- the model is not flexible enough
- the supply and demand of apprenticeships do not always correspond well with one another
- the percentage of female students has increased, but segregation has not been reduced
- certain ethnic groups have trouble finding apprenticeships
- there is still room for improvement in job counselling
- an evaluation of processes and results should be developed

Mr **Marcel R. van der Klink** examined the results of on-the-job learning and the effect of various factors on it. In summarising his own results and those of other studies Klink found that the factor most influential in on-the-job learning was the student's background (level of education, previous work experience, self-initiative and motivation). The second most influential factor was job related (variability and versatility of tasks, possibility for variation in work pressure, increased independence in tasks, job interaction, working conditions such as salary and group participation). The method of training had less significance than the two above-mentioned examples.

In summary it was found that job and task-based skills and the resolution of situations and problems encountered at the workplace can best be learned – or even only be learned – on the workplace. Also, from the standpoint of developing communication and group work skills, the workplace is the most optimal learning environment. School-based training, on the other hand, is best suited to the teaching of basic knowledge and skills, theoretical knowledge and study skills.

A primary prerequisite for quality and impact was found to be the previously discussed appropriate unification of study forms. One conclusion drawn was that the potential of the workplace to serve as a learning environment should be evaluated, analysed and developed as well as that new models and methods be created for this purpose.

Threats to quality were also addressed in the forum. One of the most significant of these was that the primary goal for the on-the-job trainee is learning, but, for the workplace, the primary operational goal is always production. A consequence of this is that, among other things, there just is not enough time for guidance or evaluation. Measures by means of which this threat can be minimised or controlled under various circumstances were presented in speeches.

Ms Kaarina Dromberg

PANEL DISCUSSION

Participants: Ms Kaarina Dromberg (chair), Mr Sergio Corti, Mr Luis Miguel Fernándes, Mr Heikki Suomalainen, Mr Reijo Raivola and Mr John West

As the basis of discussion, the rapporteurs posed questions to the participants of the panel. The most inspiring questions were following: How can a cooperative between education and working life be promoted? What could policymakers do, in order that the Leonardo programme would better support vocational education? What kind of impact does the EUROPASS Training have on, for example, the quality of training? What could be done at the workplace to improve the quality of on-the-job training?

The following is an abbreviated presentation of the discussion content.

Among other things, a genuine social dialogue promoting cooperation between the working life and education is required, not just an official "liturgy". It was hoped that the research would provide new points of view for the discussion. Likewise, demands were made for the elimination of obstacles to cooperation, some of which are the result of inflexible legislation.

In support of the Leonardo programme the bench marking philosophy was brought up, with which the dissemination of project results can be promoted. It was also hoped that the projects themselves would bear some of the responsibility for dissemination. Decision-makers should also be encouraged to participate more in project result seminars and other dissemination activities.

The position and status of the EUROPASS Training (ET) inspired a great deal of discussion. There were two opposing points of view: one considered the ET an instrument of formal qualification, while the other saw the ET as nothing more than a document, in which training received abroad is recorded; i.e. it does not serve as a tool for certification. Discussion on the topic demonstrated that the ET has yet to find its role in European educational cooperation.

Although no one denied the significance of on-the-job training (OJT) in itself, there was a very critical discussion on its status. For example, from a Finnish standpoint, the benefits of OJT may be subject to exaggeration. This may result in "incorrect performance" models, whereupon the conceptual internalisation of the work process may not be sufficient. An essential part of the quality of OJT is that students are able to conceptualise concrete matters. In the same context possible resistance to change and problems with commitment concerning OJT were also addressed, particularly in regards to post-OJT employment.

VIEWS OF FINNISH BUSINESS LIFE ON THE COOPERATION BETWEEN EDUCATION AND WORKING LIFE

COOPERATIVE UNIVERSITY-INDUSTRY JOINT EDUCATION AND TRAINING OF FLEXIBLE MANUFACTURING SYSTEMS

Mr Timo Rainio & Mr Reijo Tuokko

Tampere - Center of expertise

The Tampere Region Centre of Expertise brings together those who know, can and do. Whether one operates within training or research the centre offers a unique cooparation network through which can be broadcasted services to bold, developing companies. The Tampere Region Centre of Expertise supports regional strenghts, for example, in the following areas of expertise: Mechanical Engineering and Automation, Information and Communication Technology, Health Care Technology, Communications and Knowledge Intesive Business Services.

Through Tampere Region Centre of Expertise Programme companies can receive information and forefront knowledge of international standars that help refine. The business toward results, whether whether the companies is at the earliest stages of development or seeking a way to a new branch of growth.

Know-how in mechanical engineering and automation in Tampere region competes in global markets. the products hold a position as pioneers, and reseacrh in the region is strongly international. In the area there is more than 400 enterprises in the field and they employ more than 26 000 people. The turnover together is approximately 10 billion FIM.

Tampere Automation Center (TAC)

Tampere Automation Center TAC (http://www.tacnet.sci.fi) is a unic cooperative network in the field of mechanical engineering and automation technology (Fig.1.). The main task the center is to make the work of the participating organisations more effective and productive by improving cooperation and the flow of information. Quite new methods and cooperation models have been developed and applied in cooperation between these educational institutions and industrial companies so that this TAC-cooperation has achieved a status of a respected pioneer in the field in Finland.

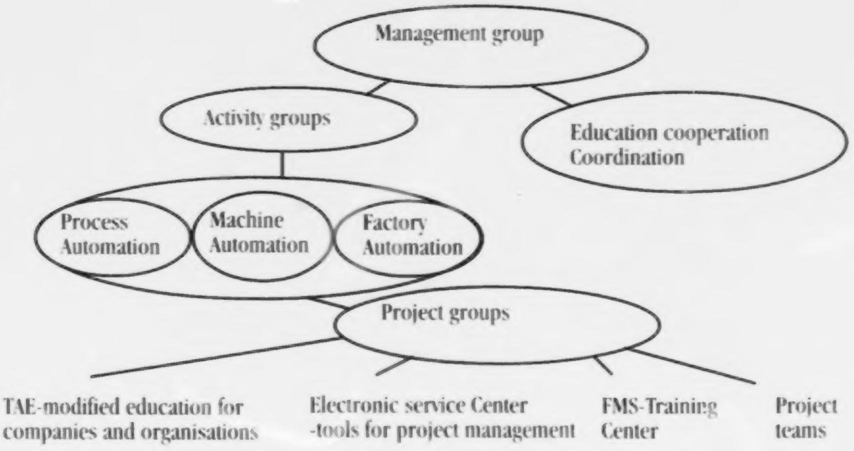
Management group
Activity groups
Education cooperation Coordination
Process Automation
Machine Automation
Factory Automation
Project groups
TAE-modified education for companies and organisations
Electronic service Center -tools for project management
FMS-Training Center
Project teams

Figure 1. Organisational structure of Tampere Automation Center

TACnet-Information System

During the information system project a forum called TACnet (http://www.tacnet.sci.fi) has been created for use of the participating organizations. Through it related companies, educational and research organizations can be found easily. The evolution of TACnet continues as part of an center of expertise program in Tampere region. The goal is that TACnet evolves to an internationally remarkable Internet-site serving especially companies working on machine manufacturing and automation branches. The site would be active as a part of the international network of EU and even wider at global level in cooperation with other similar sites.

Electrical service center – key to small companies profitability

Electrical service center –project aims to support active organisations in introduction of the newest computer technology. Tampere Technology Centre Ltd. takes responsibility for this project and carries out the project in cooperation with Tampere University of Techology, Tevanake-center and additional education center of Jyväskylä University.

During The TACnet-information project TAC has studied and developed usage possibilities to use Internet as a tool for companies and research institutes and was marketed the knowhow of schools and institutes. TAC has also promoted use of Internet for public cooperation, communication and project management.

TAC has been responsible of a partial project "electrical project working, which wants to create an operational model that uses electrical networks and tools needed for supporting project working. With this Extranet-toolbox one can control different parts of project type activities including e.g.:

- Project control

- Control of information to be handled
- Communication between parts of project (ONLINE/OFFLINE)

TAC cooperation in education

Within TAC there has already been over 5 years of development in education cooperation in automation branch at Tampere region. Following objectives were set for the first phase of OPM-funded (Ministry of Education) TAC cooperation project in education in academic year 1995-96:

- a review about the current status of education in different educational institutions of TAC
- a review about the points of focus of education and planning and arranging of teaching
- extending cooperation in teaching and seeking new activities for cooperation
- informing about activities
- evaluating and designing new ways of cooperation

The purpose of the objectives stated above was to strengthen current cooperation and seek new possibilities and thus create a common, solid automation education entity that utilizes resources as effective as possible.

In the first phase of the TAC education project the aim above all was to review the current status and create the basis for cooperation subsequently and also seek those methods and guidelines, that will be the basis for education in the future.

In consequential phases of the overall TAC coordination project experiments have been made with some teaching environments to evaluate their capabilities for distant learning. In this way the goal has been to find out

- technology needed
- methods and routines to get needed teaching material created and to prepare it to suitable form for distant learning
- teaching arrangements and practical functionality
- pedagogical benefits achieved

The developed cooperative educational network enables comprehensive supply of education and training for students at different levels (from vocational schools up to university level) as well as for employees of companies. Different types of education include e.g. seminars, basic educational courses of the schools, tailored educational courses and programs. Versatile teaching staff and teaching methods and state-of-the-art educational environments offer good prerequisites for this.

TAC-education is based on distributed joint educational environments (http://www.tacnet.sci.fi/Opetus). There is versatile information and educational material in the Internet about the equipment and related educational topics. Both the real and virtual environments are available for both schools and companies to be utilized both in basic education and continuing and adult education. Some of those environments are placed in companies which is quite exceptional and against traditions but opens new possibilities for joint education and training.

VR IN EDUCATION OF AUTOMATION

In one research project the objective is to study the activities that the created learning environments enable in immersive virtual world. Equipment and software created in former research offer the user only a very limited possibility to study an educational problem usually via some 2-dimensional numeric or graphical user interface. The most significant goal set will be the modelling of present, real automation entities and virtual prototypes and applying those models, instead of the former user interfaces, to immersive virtual environments, that has been implemented with display and input devices of virtual reality technology. The VR-environments being PC-based, presents a good basis for applying the environment in distant learning, but also causes challenge and need for research to get the environment high quality and immersive enough.

To achieve the goals of the research, a real model of the target is needed. In the high level automation technology education there is a need to study things in systems and entities that are complicated enough. In factory automation the education can, e.g., include control planning, programming and system integration of manufacturing machines, cells, robots and conveyor systems. This can be done even at the factory level.

Use of virtual models and prototypes enables operation at an adequate compexity level in teaching situation without causing danger or damage to equipment or students. Immersiveness substantially enhances the reality atmosphere and strengthens the learning process.

The research program is scheduled to be two-year. On the first year of the program the intention is to accomplish development and combining of VR environments, automation software and teaching programs to achieve an immersive teaching and learning situation at adequate complexity level. On the second year a priorisation of the teaching tasks accomplished with assistance of VR techniques will be made. Projects being aimed to group teaching and on the other hand projects being aimed to the distant learning via internet has to be separated into two different methods because of technical reasons, but both methods still supporting each other.

TAE (TAMPERE AUTOMATION EDUCATION) – MODIFIED EDUCATION FOR COMPANIES AND ORGANISATIONS

Tampere Automation Education (TAE) is an ESF-financed educational project of TAC. TAC provides high-quality, up-to-date and comprehensive education directed to small and medium size companies.

Teaching is carried out using TAC´s schools and also education resources that are provided by some companies related to TAC. Teaching is arranged in following schools:

- Tampere University of Technology
- Tampere Polytechnic University
- Tampere College of Commerse and Technology
- The Vocational School of Pirkanmaa
- The Vocational School of Tampere (Hervanta and Pyynikki)
- The Vocational Adult Education Centre of Tampere

Thanks to wide cooperation network TAC and TAE can offer versatile education in any field of automation and for all levels of employees from normal employees to managers and directors. Because of the network being so comprehensive also bigger education ideas can be carried out (Fig. 2.).

Type of training and education is defined based on background of the students and cultural and operational state of the company:

- Seminars
- Participation in the comprehensive education of the schools
- Tailored courses
- Versatile-teaching

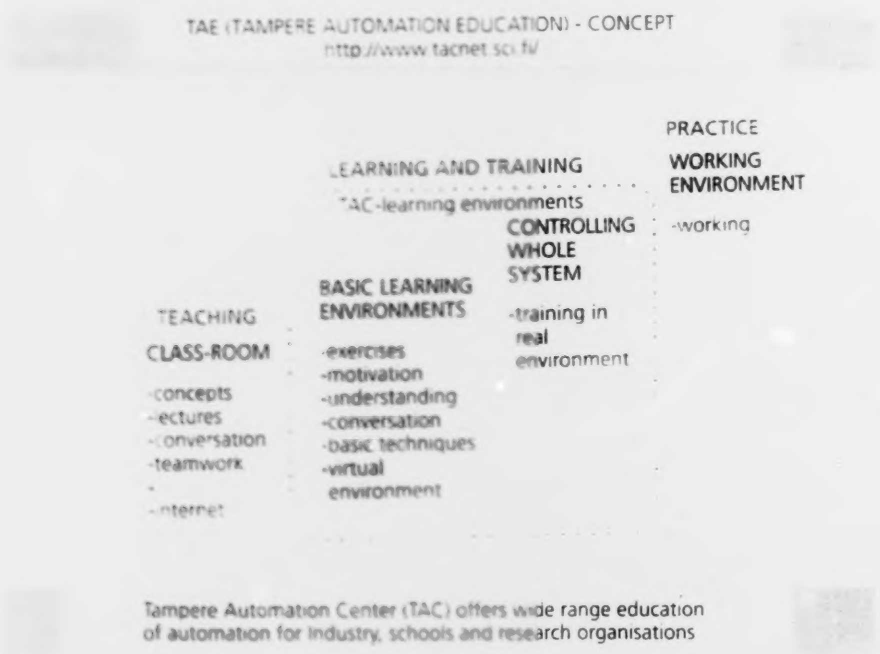
TAE (TAMPERE AUTOMATION EDUCATION) - CONCEPT
http://www.tacnet.sci.fi/
PRACTICE
LEARNING AND TRAINING
WORKING ENVIRONMENT
TAC-learning environments
CONTROLLING WHOLE SYSTEM
-working
BASIC LEARNING ENVIRONMENTS
TEACHING
-training in real environment
CLASS-ROOM
-exercises
-motivation
-understanding
-conversation
-basic techniques
-virtual environment
-concepts
-lectures
-conversation
-teamwork
-
-internet
Tampere Automation Center (TAC) offers wide range education of automation for industry, schools and research organisations

Figure 2. Concept of automation education within TAC (Source: Tampere Automation Center)

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FMS-Training Center

One top example of this kind of cooperation and joint education and training is the FMS Training Center FMS-TC (http://www.tacnet.sci.fi/Opetus/fms/fastems/aindex82.html). The built full-scale flexible manufacturing systems together with specifically and innovatively eveloped and applied information and communication technology enable modern and effective training and learning for groups and individuals.

The Center provides the most up-to-date training with state-of-the-art equipment. The overall training facility consists of two Fastems FMS-installations: one at Tampere University of Technology (TUT) equipped with a Makino A55 machining center, and the other at Fastems Tampere Factory with a Daewoo HMC-50 machining center, a Fanuc 710i-series industrial robot and a CNC lathe. Both systems are equipped with a multilevel automatic storage system and a host control system.

Both of these FMS´s are utilized by various institutes of TUT and other educational institutions as well as the Fastems company. FMS-TC is offering various taylor-made or basic courses due to the customer demands. Basic courses include:

- Principles of FMS-technology
- Basic use of FMS
- Service of FMS
- Basics of FMS-control system
- Introduction to higher-level system control

Based on the FMS study, which was made at the end of 1998, the degree of capacity utilization of the FMS-TC was about 90 % in 1998. Even this degree of utilization is exceptional in normal educational environments but the goal is still to double the capacity of the Training Center by utilizing also the evening shift in 1999.

The lack of time and money are two major excuses for companies, if they don't wan't to train their employees. The developed cooperation has tried to find solutions for these problems. The Internet environment about the FMS-TC saves time and money by offering students information about the system and educational topics via Internet. There is also a discussion board for conversations about the topics and a calendar for teachers so that they can make reservations of the environment (Fig. 7.). Special educational programs with applied public financing support enable tailored education and training also for small and medium sized companies.

Summary of interesting links

Tampere Automation Center -network TACnet: http://www.tacnet.sci.fi/
Educational environments: http://www.tacnet.sci.fi/Opetus
FMS Training Center: http://www.tacnet.sci.fi/Opetus/fms/fastems/aindex82.html

NEW COOPERATION BETWEEN VOCATIONAL EDUCATION AND TRAINING AND WORKING LIFE

Mr Martin Granholm

Esteemed colleagues,

The prerequisites for EU industrial competitiveness are skills and competences. This concerns each and every EU Member State. Companies need persons who are highly educated, skilled and adaptable to a variety of circumstances.

There is a lack of skilled labour in Finland, particularly in growth fields and growth centres. The "meeting of supply and demand" of skilled labour will be further hindered in the early years of the 21st century. This is primarily due to demographic factors: The number of persons aged 15-19 will undergo a significant decrease over the next 20 years, by approximately 50,000 persons. At the same time, the extensive retirement of the "large age cohorts" will result in an annual recruitment requirement of 70,000, if the number of jobs and labour percentage are maintained at their current levels.

However, it is known that now only approximately 50,000 persons are entering the workforce each year from new age groups. As a result, there will be a shortage of approximately 20,000 persons every year until 2010. Cumulatively, this means an overall shortage of 200,000 new employees by 2010. That is a considerable figure by Finnish standards.

According to a report prepared by the Confederation of Finnish Industry and Employers (TT) the greatest shortage is found among engineers in the information technology, telecommunication technology and electronics fields as well as among construction and metal industry professionals. In the coming years half of the demand will be satisfied with recruits obtained from universities and polytechnics, and the other half from persons with a secondary vocational education.

According to the report, the image of industry is significantly worse than that of public or service sectors. But the situation seems to be improving. There is not enough interest among youth in technology. Secondary vocational educational institutions have had a difficult time filling the available places for new students. Even if they were to fill these positions, the qualification level of students seeking employment in primary industrial fields is considerably poorer than that of students endeavouring to service industries.

One reason behind the lack of attraction held by a technical education is certainly the inadequacy of mathematics-natural science curricula in comprehensive and high schools. There are far too few persons dedicated to the long term study of mathematics, physics and chemistry.

What then must be done? During conference, many speeches have been made, in which the significantly increased need for cooperation between education and working life as well as methods of cooperation. These must be appropriately implemented in order to bring the cooperation between schools and the workplace to a new level.

In practice, the following educational policy measures could be taken:

- Anticipating systems should be further developed. We must have a clearer idea as to what type and how much skilled labour we need.
- Cooperation and delegation of responsibilities among educational institutions should be promoted.
- Reduction of multiple qualifications will bring more youths onto the labour market.
- Training periods should be shortened without compromising objectives. This concerns university level education in particular.
- The overall basis should, however, be cooperation at all levels. This means the cooperation between labour market organisations and governmental authorities. The greatest influence to be achieved is indeed the enhancement of cooperation between various educational institutions and the world of business surrounding them.

Other educational policy factors which affect the availability of a skilled workforce factors are, of course:

- realisation of life-long learning
- personnel development
- quantity and "quality" of workforce reserves (structural unemployment)

-regional and, above all, professional mobility

The utilisation of technology and cooperation aids in:

- the acceleration of automation
- the increase of productivity
- subcontracting and networking

Currently, all have a great responsibility in obtaining the right skills for the right place. By 2010, the supply and, in particular, skill of the workforce will be considered one of the primary criteria for economic growth.

During this conference, the readiness and desire of all concerned parties in increasing and improving the level of cooperation between education and the working life has been expressed. So, with everything in place there is nothing left to do but get down to work. It is in everyone's best interests that the youth of the EU receive the best possible education, which leads to an internationally commensurate and overwhelming level of skill.

Thank you for your attention.

Mr Martin Granholm

Ms Eija Alhojärvi

CONCLUSIONS

PRIMARY THEMES IN THE EUROPEAN ON-THE-JOB LEARNING DISCUSSION

Mr Kari Nyyssölä

Cooperation between vocational education and training and working life has risen a primary topic in discussions about European vocational education and training. This conference has contributed to a focused and intensified discussion and thus promotes the interaction of education and working life. Conference participants arrived from many different countries, each representing their own education culture. But, at the same time, several similarities were apparent, based on which common goals, initiatives and themes of discussion could be established. Discussions covered such topics as differences between educational systems, on-the-job learning, the learning environment and quality of vocational education, the Leonardo programme and the EUROPASS Training. All these themes play an integral part in increasing the level of cooperation between vocational education and training and working life.

European educational traditions

In implementing the interaction between vocational education and working life one learns to distinguish various traditions, which culminate in two European vocational educational traditions. The first of these is the dual based system prevalent in Central European countries and the other is the school-based educational system, which is particularly common in the Nordic countries.

In Central European countries the transition of youths from the educational sphere to working life is supported by the dual based system, in which vocational training and professional skills are obtained through an apprenticeship programme. Learning occurs primarily on the job, accompanied by short theoretical sessions in a vocational education institution. The German system is extensively institutionalised: employers, trade unions and the State are committed to the system. Among the benefits of this system are the strong vocational socialisation, the rapid conversion of new qualifications needs in training processes, a flexible transition from the educational sphere to the working life, a strong integration between social partners, the affordability of the system from a national economic and corporate point of view and a high standard of professional skills.

In the school-based educational system learning occurs primarily in state-run educational institutions. The public sector is also responsible for the direction and planning of education. Furthermore, the form the school-based educational tradition takes is affected by a host of specific national characteristics. For instance, in

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Finland, educational traditions were affected by the post-WWII economic situation as well as the relatively late industrialisation as, a result of which apprenticeship training was unable to take root in Finland as it had in Central European countries. Also, in developing the social welfare states of the Nordic countries, the right of equal educational opportunities for all was further reinforced, which in turn strengthened the school-based educational aspect of vocational education. The industry's increasing need for personnel was also an influencing factor. The school-based educational system has supported the social stability in Finland; it is not especially sensitive to rapid changes in the economy or labour markets, such as during economic recessions, for instance. Furthermore, the system supports the professional expertise independent of the employer.

The above-mentioned models are, in many ways, extreme examples. A great deal of European educational systems are mixed models, which contain influences from both orientations.

The French educational system is generally considered to be a well-defined example of a mixed model. In France the school-based educational system operates parallel to the alternance system, in which the youth's transition from the educational sphere to the working life is supported by various programmes based on on-the-job learning. Compared to the Central European dual based system, the alternance system is more multifaceted and less institutionalised. The alternance system is in essence also more social, i.e. its primary interest group consists particularly of unemployed youths and youths with a minimal level of education achieved. Central to the alternance system are, for example, apprenticeship contracts and work initiative contracts. The length and frequency of vocational education, however, varies depending on the interest group, the company goals and, above all, the distribution of responsibilities between the company and educational institution as well as the nature of their cooperation. The alternance system is occasionally used as an actual training device and sometimes as an alternative to employment.

Educational systems undergo constant change. For example, in Finland and Norway, which are generally considered to be school-based educational system countries, on-the-job learning has become a primary target for educational development. In the 1990s the capability of the vocational education system to meet the needs of a changing workplace was brought into question in Finland. Among the problems encountered were the lack of correspondence between qualifications obtained through training and the expectations of the workplace, the lack of cooperation between education and working life, the poor tradition of entrepreneurship, and the complication of the transition from education to the work.

Indeed, in the 1990s the Finnish educational system enhanced its on-the-job learning strategy, whose core manifestations are the establishment of a polytechnic system, development competence-based qualification system, reinforcement of the position of on-the-job learning periods in vocational education and the expansion of apprenticeship training. For example, the number of persons participating in apprenticeships multiplied in Finland during the 1990s, even though the percentage of apprenticeships among all persons participating in a vocational education is still quite low. Finland is in transition towards a less institute-based instruction. The role of educational institutions will, however, remain important.

In Norway an extensive reform of vocational education was carried out in the 1990s, during which those already engaged in vocational instruction were switched over to a 2+2 system. In this system the period of instruction is divided into 2 two-year periods, the first one of which takes the form of school-based instruction and the second one is implemented as company-based.

Formal education as a basis for lifelong learning

Efforts are being made to increase the amount of on-the-job learning throughout Europe, particularly in those countries where the tradition of school-based instruction is strong. Conversely, a critical discussion on the functionality of the apprenticeship system is being held in Germany, which is considered a model for on-the-job learning. Among the negative aspects of the apprenticeship training system are limited opportunity in gaining new experience (e.g. international experience) outside one's own vocation, the inflexibility of standardisation and regulation, limited vocational mobility, scant opportunity for the recognition of individual achievements during instruction, incongruity in the distribution of educational costs and limited opportunities in the achievement of high qualifications.

At the conference, it became apparent that apprenticeship training should be modernised. The discussion that followed addressed the status of the instructor. The instructors must be dedicated to the work process, they must maintain a close correlation of theory and practice and they must be technically up to date. Furthermore, more attention must be given to instruction in service sector and entrepreneurship in vocational education.

Especially in Finland entrepreneurship became a central issue of employment and educational policy in 1990s. With increasing unemployment in the beginning of the 1990s, there was a desire to reinforce the status of entrepreneurship and the position of self-employment in vocational education and training. In addition to actual entrepreneurship, there were also discussions concerning internal entrepreneurship, which means the creation of the entrepreneurial spirit through training. Promotion of entrepreneurship has indeed been taken into account in Finnish vocational education curricula. However, entrepreneurship is not easily taught in a school setting. In a study conducted in Finland it was found that the longer education an individual has, the less likely he/she will become an entrepreneur.

There are no proven models or methods for the implementation of on-the-job learning. As seen at the first forum, each country has its own approaches and educational traditions, to which the on-the-job learning philosophy is more or less applied. During the same forum, it was also found that, in emphasising on-the-job learning, one must not forget the status of a formal education: lifelong learning is only possible if it is based on a functional formal education system; all learning cannot occur at the workplace.

The educational systems of Central and Eastern Europe were also discussed at the first forum. As a result of the socialist systems these countries still have a strong school-based tradition. Due to activities of the European Training Foundation, new occupational oriented training models have been developed for companies operating in market economies, which, in itself, eases the adoption of a European educational tradition by the formerly socialist countries.

Threats to quality

Differences between instruction occurring at the workplace and the classroom were discussed in particular at the fourth forum, whose theme was the quality of on-the-job learning. On-the-job training (OJT) has its indisputable advantages: it increases social skills and the ability to work in teams, it is practical, it provides a realistic idea of what the vocation contains and it allows for the use of the latest information and tools. On the other hand, OJT has its negative aspects: there are limited opportunities for obtaining theoretical information and complex skills, an extensive and "critical" idea of the work process and the possibility to develop core skills is not always realised and OJT is finally dependent upon the will and commitment of the employer.

A great deal of general, extensive and transferable skills that can be taught in the classroom fall short in OJT in which practical and context-based skills are emphasised. It is important to avoid concentrating on either classroom instruction or OJT; both learning environments should be enriched.

Indeed, at the fourth forum, it was found that a prerequisite for quality is the combination of different learning environments. Potential learning environments in the workplace in particular should be evaluated and developed, for which new models and methods should be created. The conflicting interests of various parties are seen as a threat to quality: the primary goal for the on-the-job trainee is learning, but, for the workplace, the primary operational goal is always production. This conflict of interest often results in that the employer does not always have sufficient time or resources to promote on-the-job learning.

Mobility an integral part of European educational cooperation

Mobility and the utilisation and approval of vocational education received in different countries at the national level are essential to the development of on-the-job learning and vocational education. These topics were addressed in two forum at the conference, one of which concerned the Leonardo programme and the other the EUROPASS Training. Both Leonardo and EUROPASS are part of a wider transnational mobility, whose goal is not only the promotion of mobility for students and experts but also the expansion of cooperation between schools, training institutions and companies.

The Leonardo topic in the second forum concentrated mainly on the issue of dissemination. In the 1990s the Leonardo programme had an active participation and it established its position in the European educational cooperation. Entering the second term of the Leonardo programme, more attention must be given, however, to the impact of the programme instead of the participation.

The main question is how to bring the innovative operating methods and initiatives developed in the projects to the attention of the general public, thus making them a part of the national educational system development. Generally speaking, the Leonardo projects and their results are not widely known. Project results are sometimes not even known within their own organisations. Project work and the related administrative difficulties overload those involved with work and they cannot always characterise the results of their work.

A unanimous point of view was that, in order to improve the influence of the Leonardo programme, an effective dissemination strategy must be created. As the basis of this dissemination strategy, the nature of the disseminated information was divided into three parts: general information on the programme, dissemination of information on specific projects (including their content and products) and thematic analyses of results and their resulting innovations. The following measures were brought forth in the implementation of the strategy: the effective support and advice of national agencies for the projects, improving the use of a project data base and the production of thematic analyses as well as their dissemination to decision-makers (valorisation). It must also be kept in mind that this is a long-term and challenging effort, in which not only information is disseminated, but an entirely new way of thinking.

In the same forum the status of the Leonardo programme was addressed from an expanding educational policy standpoint. The Leonardo programme was found to be an excellent foundation for adapting different philosophies to national educational systems. At the forum, it became evident that the goals of the European Union and goals at the national level do not always correspond well. It is for this reason that the Leonardo projects can, for their part, reduce the conflicts caused by this juxtaposition of interests and thus promote educational cooperation in Europe. It was emphasised at the forum that the goal of the Leonardo programme is to support and complement national education, not to replace it.

With an increase in mobility, there is also an increase in the need to reliably document all qualifications received abroad. This issue was discussed in the third forum, whose theme was promotion of mobility and implementation of the EURO-

PASS Training (ET). Discussions in the forum centered primarily around ET certification, which is a document that provides a uniform description of the "European pathways" received in another Member State. It was emphasised in the forum that the ET is first and foremost a tool for documentation, which provides a description of the training accompanied by special quality criteria. The level of foreign *on-the-job* training sessions is improved with these quality criteria; when the points required by the criteria are recorded in the ET, they are more likely to be come reality than was previously possible. Naturally, use of the ET must also include monitoring and evaluation.

Because the use of the ET is voluntary, it is important that all involved parties – schools, students, companies and employer/employee associations – understand the added value a uniform certification brings and implement it. ET will also be seen as a cooperative venture, not, for example, as a unifying factor in qualification-based training.

The role of the ET as part of the recognition of qualifications was also addressed in the forum, using the recognition systems of universities as an example. However, one must bear in mind that, contrary to vocational education systems, universities are essentially quite similar in different countries, whereupon the recognition of qualifications is basically more similar in character comparing vocational education and training. On the other hand, it was discussed at the forum that the standardisation of certification could be done on a voluntary basis, such as in projects of the Leonardo programme.

Finally

Vocational education will eventually be central to the comprehensive education of knowledge and skills, whereas training is still more difficult to distinguish from the development of organisations, learning and innovations. Just as Mr ***Ilkka Tuomi*** stated in his presentation, new knowledge is best obtained in the place it was created; information is more than ever being transferred to networks, which then become important learning environments. Naturally, this scenario challenges the formal education, when it must compete with the likes of Microsoft or IBM for its position as a producer of knowledge and skills.

Learning, whether it occurs in a school, at work or through a network, is a lifelong process, which must be supported in every phase of the life cycle. As Mr *Johan van Rens* emphasised, there is no single right way to learn – in order to provide the best support for trainees, the right balance between school-based elements and work-based elements must be struck. Neither should all learning occur during training - the individual also learns through experience. The status of informal learning in vocational education should also take the recognition and certification of skills into consideration.

Mr *Timo Lankinen* also addressed the issue of providing information for company personnel, so that students receive the best possible guidance on the road to professional life. Likewise, special resources should be reserved for ensuring the quality of on-the-job learning in educational institutions. One cannot forget the role of students in the learning process. Students must be informed so that they understand the importance of on-the-job learning as a part of qualification.

During its EU presidency, Finland has been active in promoting on-the-job learning and addressed several important themes. As Ms *Maija Rask* stated, in European cooperation the primary areas in training and vocational education must be determined and thought must be given to how European cooperation in the educational sphere can be developed. As a consequence, thought must also be given to how working methods can be rationalised in order to ensure a greater continuity and uniformity of work over a period of several years, not just during a single Presidency.

On-the-job learning must be approached with an open mind and, at the same, fruitful discussion, like this conference, must be maintained. Likewise, one must bear in mind Mr *Otto Dibelius*' statement that the primary goal of reinforcing on-the-job learning and promoting mobility is to create an open training and cultural arena for European citizens. This will provide Europe with sufficient economic, social and cultural challenges.

CONFERENCE DINNER AT RESTAURANT TAMMER, HOSTED BY THE MINISTRY OF EDUCATION

Ms Maija Rask

The Bambies

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NEW CHALLENGES IN THE COOPERATION BETWEEN EDUCATION AND TRAINING AND WORKING LIFE

Vocational education is seeking new forms for the 21st century. The globalisation of the world economy and developments in information technology have a greater impact on the planning and development of vocational education than ever before.

The goal of vocational education will be to increase the professional expertise of the entire working population, to provide basic preparations for lifelong learning and to fulfil the needs of the workplace. Achieving these goals requires cooperation between educational organisations and working life as well as between European states.

This report is based on the *New Challenges in the Cooperation between Education and Training and Working Life* conference held in Tampere on 18-19 November, 1999. The report deals with the comparison of various on-the-job learning models, the impact of the Leonardo programme, the EUROPASS Training and the quality of on-the-job learning.

The report contributes to the European discussion on on-the-job learning, hopefully inspiring new ideas in the bringing together of education and working life.

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